A study of the effects of Peaceable Schools curricula on student achievement in an urban middle school

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Submitted in partial fulfillment of the requirements
for Phase III of the Ph.D. Program in Educational Studies

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CHAPTER 1.0: RESEARCH OBJECTIVES

1.1 Introduction and Definitions

Students are half as likely to be victims of violence within school as they are outside it (Walker, 2008),[1] but this does not mean that violence, be it physical or social, in or outside of school, does not have deleterious consequences for students' physical and emotional well-being. If America ever hopes to emerge from its current culture of perpetual warfare and insecurity, something needs to be done to train our next generation to depart from its own culture of violence and instead develop the skills of non-violent conflict resolution, of peacemaking.

Most education reformers, though doubtless concerned about this issue, focus the lion's share of their resources on examining a different problem, the failure of so many students to acquire basic academic skills. The outcomes-based movement in education has issued a call for improvements in American public education at the K-12 level; yet, too frequently the response has been limited to increasing standardization of school structures. As well-intentioned as outcomes-based reformers may be, they are only seeing part of the puzzle of student achievement. The problems of high school violence and low student achievement are related. Effective school reform needs to address both issues simultaneously. We need to examine both the curricular content of what students learn and the social-environmental framework in which they learn it. Standardized reforms as we have seen them in the wake of No Child Left Behind (NCLB) have only partially addressed the former, and almost completely ignored the latter.

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[1] Formatting note: Citations without page numbers are from web-based sources, and their citations here deviate from APA format (which would require the listing of the entire web page title in lieu of a page number) in the service of readability. Please refer to the References section for the relevant titles and URLs.

In regards to the latter, this dissertation will present a series of studies indicating that students learn better (as measured by grades, standardized tests and researcher-invented instruments) in classrooms where the following elements, which will be referred to in the text as **P-Factors**, are present:

1. A sense of comfort, safety and security, both physical and emotional

2. Cooperation and connection within school communities

3. Cooperation and connection with communities and ideas beyond the classroom

4. Opportunities for critical thinking, especially perspective-taking (the ability to try and see events from another's point of view) and metacognition (engaging in critical reflection on the process of one's own learning)

In short, students learn better if they have greater sense of safety (less permeated by fear of physical or, more commonly, socioemotional violence) and have more opportunities to develop the skills for working in positive, supportive groups and for connection with others. Critical thinking is enabled by, and in turn is helped to sustain and further develop, these kinds of environments. If the presence of these factors in classrooms raises student achievement, and these factors are present in peaceable school programs, ergo, peaceable school programs can raise student achievement.

Social constructivist theory, rooted in the work of Lev Vygotsky, offers an explanation for this correlation between environment and achievement: students construct knowledge, as opposed to passively receiving a "copy" of information from an instructor or textbook. Students enter into a dialectical relationship with the people and environments in which they learn, and it is through these interactions that they develop

new skills and understandings (Daniels, 1996; Hansen-Reid, 2001; Hedegaard, 1990**;** John-Steiner & Souberman, 1978; Jones, Rua & Carter, 1998; Van der Veer & Valsiner, 1994; Vygotsky, 1931, 1962, 1978).

I have labeled the four environmental elements above (safety, cooperation, connections beyond the classroom and critical thinking) "P-Factors," not only because they are correlated with academic performance, but because they are also key elements in school programs and curricula that claim to promote peaceable spaces and the study of **peaceability**.

Peaceable spaces and peaceability are terms related to the concept of "positive peace" (Lieber, 1994); namely, not merely the absence of war but the creation and maintenance of a safe, just, cooperative society. Lesley University's Center for Children, Families, and Public Policy (originally the Center for Peaceable Schools and Communities) [2] makes the connection between this model and **peaceable schools**:

> Peaceable Schools and Communities envisions a global community free from violence, disconnection, and systemic inequity where inclusive, empowered learning that is rooted in the values of affirmation, consensus building, excellence, and equity is a reality for all members. As a result of the Peaceable Schools' efforts, educators, young people, and other community members will have the tools, knowledge and relationships to live out and generate welcoming, dynamic and interconnected communities. (Lesley University, "About us")

A peaceable school, then, is one in which students are actively engaged in learning how to create cooperative and self-reflective environments, the very ones in which the research shows that they learn best. As the next chapter will detail, Vygotsky theorizes that the two processes are intertwined—since all learning is negotiated, and since we can learn more with the help of our fellows, then one must learn the skills of

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[2]   The Peaceable Schools and Communities was originally the Center for Peaceable Schools. In the 2000s it was made part of the Center for Children, Families and Public Policy. Both centers existed simultaneously for a while.

cooperation and negotiation in order to effectively learn anything at higher order thinking levels.

At the moment, too many schools tolerate or even promote structures that interfere with this process. Many schools and classroom spaces are non-democratic and maintained by top-down models of discipline, which, according to constructivist theory, are not the ideal structures for genuine learning. In and outside the classroom, many school environments tacitly reinforce adversarial, non-peaceable values such as bullying, name-calling and social exclusion. By changing the environment in and outside of classrooms to incorporate the P-Factors, schools may be able to simultaneously raise student achievement and reduce violence and the anxiety it produces among their students.

In order for these ideas of cooperation within the school culture to make sense to students and be held in their minds as "real world possibilities," students need to simultaneously inject examples of successful implementation of these peaceable approaches to conflict in the world around them. Most curricula also reinforce adversarialism and downplay (if not outright ignore) cooperative, creative problem-solving in human history. Social studies classes present an image of war and violence as guiding principles of human history; gym classes and sports promote aggressive competition; science classrooms use a variety of military analogies (like "battles for species survival" or the immune system "conducting a war" to defend the body) to describe biological and physical processes. It doesn't make sense for schools to create cooperative spaces where conflicts are resolved nonviolently if students cannot connect these experiences to a rich history of nonviolence, or if they are not engaged in at least

some formal critique of the dominant scientific and historical paradigms that promote a Hobbesian, Darwinian "every man for himself" world-view. Since one of the P-Factors explicitly demands connections to the world beyond school, students need to not only practice creating cooperative, peaceable structures but to study the structures that have been created in the world around them, and to critique worldwide practices of war and violence rather than accept them as inevitabilities. The converse is also true: a curriculum offering such a critique would seem woefully abstract and unrealistic if students did not have an active hand in creating cooperative environments that allowed them to critically examine their own learning and the perspectives of others, but instead received only top-down instruction.

An educational approach which combines the structural P-Factors with a curricular inclusion of peace and critiques of war is no mere fantasy, but exists within the bounds of existing K12 programs across the country. These programs, concatenated perhaps for the first time in the included typology of my design (see Chapters 2.4 and 2.5) appear to operate using the P-Factors which both promote peace and promote performance. It is thus possible, using existing programs, to test the author's hypothesis that a peaceable schools approach would be one that not only reduces violence and increases peacemaking skills, but that also increases student learning and performance.

My study was an attempt to investigate the operation of one of these programs in at least one school to see if there is a potential correlation between the employment of the program and a rise in student **achievement**. Robinson and Xavier (2007) define academic achievement as

a student's success in an academic discipline, an exhibited level of competency on some type of standardized test (e.g., SAT, ACT, state mandated exams), or grade point average. Additional identifiers of student achievement may include… behavior or conduct. (21)

In this study, then, I will be defining achievement as a rise in measurable quantitative outcomes such as standardized tests and classroom grades, as well as observable, behavioral indicators of critical thinking. As I measure this data, I will also attempt to use qualitative data to attempt to assess what has caused this change in achievement by looking at the nature of student interaction in the classrooms, assessing whether student attitudes have changed and become more cooperative and/or less violent. Clearly, a great deal of work needs to be done to study the many facets of this theory, but this study represents an early step in exploring this new ground.

1.2   Identification of the Problem

School safety, or the lack thereof, has been a persistent concern in the United States in the last twenty years. Students nationwide go to school in a variety of unsafe environments; by the end of the 1990s, the US Department of Justice reported that "although there have been few studies of the prevalence of bullying among American schoolchildren, available data suggest that bullying is quite common in U.S. Schools" (Arnette & Walsleben, 1998). The report cites a study of 207 junior high and high school students from small Midwestern towns, wherein

> 88 percent reported having observed bullying, and 77 percent indicated that they had been victims of bullying during their school careers. Another study of 6,500 students in fourth to sixth grades in the rural South indicated that 1 in 4 students had been bullied with some regularity within the past 3 months and that 1 in 10 had been bullied at least once a week. Approximately one in five children admitted that they had bullied another child with some regularity in the previous 3 months. These figures are consistent with estimates of several other researchers. Furthermore, contrary to popular belief, bullying occurs more frequently on school grounds than on the way to school. (Arnette & Walsleben, 1998)

In a larger 2001 study, almost 30 percent of youth in the United States (or over 5.7 million) were estimated to be either victims or perpetrators of bullying - the two categories were not considered mutually exclusive (Nanser et al., 2001). The next year, a U.S. Department of Education study reported bullying incidents increased by 5 percent between 1999-2001 (U.S. Dept. of Ed., 2002). In surveys of third through eighth graders in fourteen Massachusetts schools, nearly half who had been frequently bullied reported that the bullying had lasted six months or longer, and 30 percent of the respondents reported that teachers did little to intervene (Mullin-Rindler, 2003). Nationwide, research from the US Department of Health and Human Services' National Bullying Campaign found that up to 25 percent of U.S. students are bullied each year. As many as 160,000 may stay home from school on any given day because they are afraid of being bullied" (Castle, 2003).

In addition to the traditional understanding of bullying as the use of physical force and intimidation, social scientists have become increasingly aware of the pervasive environment of emotional abuse and relational aggression facing adolescent girls in their schools (Wiseman, 2003; Simmons, 2003).

In a smaller but more dramatic set of cases, such environmental dangers erupt into physical violence. The US Dept. of Education's National Center for Education Statistics (NCES) surveyed principals in 1,234 regular public elementary, middle, and high schools in all 50 states and the District of Columbia for the 1996-7 school year and found that 57 percent of public schools reported suffering crimes, but only 10 percent reported violent crimes (NCES in Kelly, 2000). By the 1999-2000 school year, however, the number of "serious violent crimes" (rape, aggravated assault, robbery) had doubled to 20 percent, with 71 percent of schools reporting "violent incidents" of some sort and 46 percent reporting thefts (NCES, 2004). Even in the statistically safer year 2000, 53 percent of students in a CBS News Poll reported that they believed a school shooting could happen in their school, and 22 percent reported that they knew students who routinely carried

weapons (Mackler in Kelly, 2000). Students are not alone in their anxieties—teachers, too, are victims of school violence, suffering 473,000 violent crimes and 817,000 thefts nationwide in their schools in 2003 (NCES, 2003).

Curricula and programs which satisfy the definitions of "Peace Education" have been shown in many cases to be capable of bringing about measurable, more pro-peaceful/pro-cooperate attitude change in students (Eckhardt, W., 1984; Jeffries, R. & Harris, I., 1998; Lantieri, L. & Patti, J., 1998; Barnett, R, et al., 2001; Batiuk, M., Boland, J., & Wilcox, N., 2004 ; Biton, Y. & Salomon, G., 2006), and these represent only a fraction of hundreds of such studies in publication. Much of this research has itself been evaluated, with positive results; for example, the Vanderbilt Institute for Public Policy Studies' Center for Evaluation Research and Methodology closely examined 584 independent studies of such programs (Derzon, J., Wilson, S., & Cunningham, C., 1999), and focused on 82 to "rate" on a scale of 1-4, concluding in its summary that "school-based programs are effective in preventing and reducing violence and other antisocial behaviors. They accomplish this reduction by successfully reducing the mediating conditions and behaviors they seek to alter" (p. 30).[3]

For all the concerns about addressing school violence, both physical and relational, it is seldom that policymakers explicitly connect these issues to the larger— and judging by the amount of time and money invested—more important issues of whether students are learning what they need to be learning in their schools. General sentiment in the United States has arguably viewed public education as being in dire need of improvement for the past twenty-five years. The 1983 report of President Ronald Reagan's National Commission on Excellence in Education, *A Nation at Risk*, touched off a wave of attempts to address perceived failures of public education through reforms involving increased standardization in instruction. This trend persisted and in 1994, the

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[3] To be fair, the report did call for a need for more stringent research methods, as the overwhelming majority of the 584 studies they examined did not meet their standards for rigor.

US Congress set the National Education Goals, articulated in terms of standards-based

education reform, developed around the principles of "outcomes-based education," a

philosophy often conflated with "standards-based education." Outcomes-based education

is a

> definition of education that shifts from the traditional focus on what students
> should be taught (content) and how much time they should be taught it for, to a
> focus on setting universal standards of what students are expected to demonstrate
> they "know and are able to do." The traditional model that some students would
> be tracked for success while most others would be tracked elsewhere is rejected in
> favor of continuous improvement, and success "for all" students…all definitions
> and names for standards based reforms share an emphasis on setting
> clear…higher standards, and observable, measurable outcomes. Crucial is the
> belief that all students can learn, which means students of all abilities, all social
> racial and ethnic groups, and genders, sometimes disabilities as well. (McNeir,
> 1993)

These definitions of achievement were established by the 2001 No Child Left

Behind Act (NCLB), which among other things mandated each state create new (or

enshrine existing) learning standards, on the basis of which all students must be assessed

through standardized tests in order to graduate. Critics (for example, Garan, 2004)

argued that, in practice, this would mean that "skill and drill" instruction geared towards

test performance would replace true comprehension and mastery of the material.

According to the CPE (Center on Public Education), NCLB's implementation caused 71

percent of the districts CPE surveyed to cut back on instructional time for subjects that

were not immediately related to the reading and math skills covered on the tests (Trickey,

2006).

Similarly, the outcomes-based movement has affected the way in which

educational research assesses the efficacy of educational practices. The National

Research Council (Shavelson & Towne, 2002) makes an urgent, detailed call for

standardization and rigor in educational research, apparently seeking to bolster the

credibility of a field they describe as being "plagued by skepticism concerning the value

and validity" of its scientific methods" (p. 13). In a political climate that demanded

quantitatively measurable results, the NRC called upon educational researchers to develop and implement their work in "clear, unambiguous, and empirically testable terms…linked through a chain of reasoning" (p. 18). The NRC claimed to be responding to a public that "seek[s] trustworthy, scientific evidence" and "a working consensus about what works in what contexts and what doesn't, and on why what works does work" (p. 22).

While they may have the best of intentions, administrators and policymakers nationwide appear to have responded to the admonitions of the standards-based movement with a push towards greater uniformity in instructional practices. A host of studies (many of which are summarized in Sunderman, Kim, & Orfield, 2005; Rose 2004; Fairtest.org, 2003) have demonstrated that student learning has not substantially improved in the wake of these reforms, especially among poor and minority students nationwide. A strategy of increasingly standardized math and reading instruction, supplemented by even more hours of standardized instruction if students fail the assessments, seems to have limited ameliorative effects.[4] Jacqueline Ancess, Co-Director of the National Center for Restructuring Education, Schools, and Teaching (NCREST) at Teachers College, Columbia University, conducted twelve years of research in urban and suburban schools that included

> more than 100 interviews with students, teachers, school and district leaders,and parents; observations of classroom instruction, performance assessments, school life, teacher team and faculty meetings, and professional development; and review of school and district documents, teacher curriculums, and student work. (Ancess,

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[4]   Furthermore, as an unintended consequence of the standardization renaissance, argues Mandel (2006), new teacher retention has suffered. "Since No Child Left Behind was enacted, school districts have felt forced to focus solely on testing…consequently, nearly every decision at the local school level involves `teaching to the standards.' This excessive focus on testing and standards has led to a lack of focus on the practical guidance and support that would help first-year teachers stay afloat" (p.66). If, as this paper will subsequently argue, changes in school climate and environment affect student learning, then the lack of consistency caused by high teacher turnover may actually harm student performance, an ironic result given NCLB proponents' intentions.

2004, p. 36-7; see also Ancess, 2003)

She concluded from her research that, in the face of "high-stakes testing and accountability…the resulting test-prep/test-coverage curriculum undermines the process of individual and collective meaning making by encouraging the notion that nothing matters more than figuring out the answers to the test" (p. 36).

Author Jonathan Kozol presents South Bronx school P.S.#65 as emblematic of the failures of how schools have responded to the outcomes/standards-based call, a school where

> …fifth-grade teachers had to set aside all other lessons for two hours of the day to drill the children for their tests for three months prior to exams…On top of this, two afternoons a week, children had to stay from 3:00 p.m. to 5:00 p.m for yet another session of test-drilling, and on Saturdays they had to come to school again for three additional hours of the same routine during the final four weeks just before exams….*Nobody believed test-drilling was of educative worth. Its only function was to…defend the school from state or federal punishments.*" (Kozol, 2007, p. 25. Emphasis mine)

Part of the problem may lie in the ironic incompatibility between these methods of instruction and the *type* of learning that the outcomes-based movement wants students to experience. If we just wanted students to recall facts and figures, these instructional methods might serve, but interestingly enough, the outcomes-heavy National Research Council, along with their call for standardization, simultaneously calls for a new kind of learning. Another NRC document (Bransford et al., 1999) claims that "in many cases, schools seem to be functioning as well as ever, but the challenges and expectations have changed quite dramatically (e.g., Bruer & Resnick, 1987)" (p. 119-20). While schools originally were designed to prepare their graduates for efficiency in factory or clerical-style standardized tasks, says the NRC, the demands of today's job world require students to "understand the current state of their knowledge and build upon it, improve it, and

make decisions in the face of uncertainty" (Talbert & McLaughlin, 1993 in Bransford et al., 1999, p.120).

This need for problem-solving and "adaptive expertise" expressed by some in the outcomes-based movement actually seems to fit well with the higher levels of Bloom's Taxonomy of the Cognitive Domain wherein students must not only recall and translate data but use it in new applications, distinguish its organizational structure, build new structures and evaluate that work (Bloom et al., 1956). But paradoxically, the standardization of practices that schools adopt to meet the heavy testing focus of the outcomes-based movement would, by its very nature, seem to preclude this sort of "adaptive expertise." NCLB and the outcomes-based movement are not flawed in their goals for student achievement; rather, they are pursuing the wrong path to get there.

What is there to do? When Shavelson and Towne, speaking for the outcomes-based movement, announce that they categorically "reject the postmodernist school of thought" (p. 24), simplistically defining that epistemology as one that "posits that social science research can never generate objective or trustworthy knowledge" (p. 25), they may unwittingly ignore theories like Social Constructivism. In their resistance to approaches that focus on idiosyncratic community conditions (and that therefore, in their view, lack broad generalizability), they risk cutting themselves off from the very tools that social scientists have developed during the last thirty years in recognition of the complex, dynamic nature of the fields they study, tools which could address many of the socio-cultural and environmental issues that hamper students' learning and interfere with high achievement.

1.3 Rationale for the Study

In this dissertation I attempt to draw upon research, within a theoretical framework informed by both Social Constructivism and Peace Studies, to argue that discomfort due to the fear of violence and alienation interfere with student learning and achievement. I will also argue that schools and classrooms in which students are safe create and maintain cooperative communities in and outside of school, and reflect meaningfully on their learning are those in which they learn and achieve at higher levels. By focusing on adjusting and responding to these climate issues, teachers and students alike may be able to improve the very skills that NCLB and outcome-based education ask of them.

More than just this definition of achievement is at stake, however: As the Center for Education Reform (CER) argues:

> Despite this country's mostly admirable utilitarianism when it comes to education, good education is not just about readiness for the practical challenges of life. It is also about liberty and the pursuit of happiness. It is about preparation for moral, ethical and civic challenges, for participation in a vibrant culture, for informed engagement in one's community, and for a richer quality of life for oneself and one's family…the decisions we make about education are really decisions about the kind of country we want to be; the sort of society in which we want to raise our children; the future we want them to have; and even-and perhaps especially-about the content of their character and the architecture of their souls. (Allen, et al., 1998)

Could the right kind of school climate address both the outcome-based critics' desires and those of the CER? Could it help students acquire strong basic skills and competencies, as well as the socio-emotional competencies that the CER poetically terms the "content of their character and the architecture of their souls?" In short, could the same school climate that reduces violence and promotes peace also increase achievement?

In order to investigate this question, a study is needed in order to test the effects of a peaceable schools curriculum on student achievement. It is reasonable to assume the former has a positive effect on the latter, because for social constructivists, the two are inextricably related. However, to date, very few studies have been published that explicitly link the two.

1.4 Limitations of the study

Ideally, such a study would merit a scale on the order of the Coleman Report, researching dozens of schools from a variety of regional and socioeconomic sectors. The population of the study would be large enough for generalizability, and student and teacher selection would be carefully adjusted to assure both randomness of selection and consistency in the delivery of the treatment. The treatment itself would be a fully developed, proper implementation of the most successful of peaceable schools programs, and sufficient manpower would be available for thorough data collection and analysis.

Based upon realistic estimates of my own personal resources, however, only a small scale, "proof of concept" study was feasible. I began by studying six classrooms in two schools in Massachusetts, and in the end the study only included four classrooms in one school. A great many factors were beyond my ability to control, resulting in far less reliable data and thus far weaker conclusions than would be ideal to explore the research question. The results of such a study could never provide smoking-gun evidence to support the thesis, but nevertheless could, and did, yield interesting and promising insights that would justify the implementation of this kind of model on a scale and with the resources it deserves.

2.0 REVIEW OF THE LITERATURE

2.1 Introduction

After a survey of the available research, I have identified four environmental factors believed to both promote peace and increase performance—hence the appellate "P-Factors." From here on in, "promotion of peace" as opposed to "reduction of violence" will be the operative terminology, for reasons that will become evident after presenting the theoretical portion of this document. In short, the P-Factors, in a social constructivist framework, operate through the active creation and maintenance of safe, amenable spaces for learning, creating structures whereby conflicts can be resolved nonviolently. This is fundamentally different from merely reducing incidents of violence; a police state, for example, may reduce street violence, but does little to create the mechanisms whereby communities can build structures for settling their own problems peacefully.

The P-Factors are the following:

1. A sense of comfort, safety and security, both physical and emotional

2. Cooperation and connection within school communities

3. Cooperation and connection with communities and ideas beyond the classroom

4. Opportunities for critical thinking, especially perspective-taking (the ability to try and see events from another's point of view) and metacognition (engaging in critical reflection on the process of one's own learning).

The syllogism that follows is: If the presence of these factors in classrooms raises student achievement, and these factors are present in peaceable school programs, then ergo, peaceable school programs can raise student achievement.

2.2 Social Constructivism

Before surveying the literature on these factors, it is necessary to contextualize them within the domain of School and Classroom Climate Studies, henceforth abbreviated in this paper as "School Climate." School Climate research examines structures, spaces, circulation, transparency, social relations, and all of the other seemingly external factors that, according to Social Constructivism, together play a role in the acquisition of knowledge in that they mediate—engage in a dialectic with— whatever the individual brings from his or her own biological and "personal" bag of tricks. A change in these climatic factors in a classroom or community could, in a constructivist view, change the learning and achievement of the students within.

Before proceeding further, it is necessary to review the tenets of Social Constructivism, beginning with Vygotsky. Lev Vygotsky (1836-1934) was a Russian Jew whose desire to be a teacher was squelched by the Czarist restrictions on Jewish employment (Hansen-Reid, 2001). He instead became first a doctor and then a lawyer. Later, in the post-revolutionary USSR, Vygotsky began an academic career at the Institute of Moscow that culminated in 270 scientific articles, numerous lectures and ten books, many of which pointed to social and cultural factors which he believed influenced the development of thought, language and learning. Premier Joseph Stalin banned Vygotsky's work two years after the theorist's death from tuberculosis on the grounds that it was not compatible with the dominant visions of Marxism, but the ban was lifted upon Stalin's death in 1953. By 1962 Vygotsky's work became readily available outside the Iron Curtain.

Even behind such a barrier, Vygotsky was not functioning in a vacuum, nor was

he the first to develop theories of socio-cultural influence on education. Vygotsky was well versed in both Piaget and Sapir and Whorf (between whose theories he attempted to situate his own), not to mention Hegel and Kant. He had also read John Dewey's critiques of memorization, drill-and-practice based education in the United States, particularly Dewey's advocacy for an education rooted in a child's own experience, interests, and motivations. Dewey was even invited to Russia in 1917 to advise the nascent Soviet school system (Stokes, 2007). Indeed, it is in responding to all of these theorists, particularly Piaget, that Vygotsky distinguishes himself and his own ideas about education, which pave the road towards contemporary theory on the importance of school climate.

Vygotsky's initial arguments in his first book, *Thought and Language*, involve refuting Piaget's claims that climate—or indeed, any environmental experience whatsoever—has no effect on a child's learning. According to Vygotsky (1962), Piaget's "experiments led him to believe that the child was impervious to experience" (p. 23). Piaget constructed a series of stages through which a child progresses, many of which are spent in an "egocentric" state, apparently uninfluenced by the outside world, proceeding along an individualized biological timetable. Piaget (1923) writes that "the child never really and truly comes in contact with things, because he does not work. He plays with things, or takes them for granted" (p. 269). Vygotsky disagrees, claiming that these Piagetian stages "are not laws of nature but are historically and socially determined." He continues, citing other contemporary critics:

> [Piaget] has already been criticized…for his failure to sufficiently take into account the importance of social situation and milieu. Whether the child's talk is more egocentric or more social depends not only on his age but also on the

surrounding conditions. (p. 23)

In *Mind and Society* Vygotsky (1978) resists the Piagetian assumption that

> processes of child development are independent of learning [and that] learning is considered a purely external process that is not actively involved in development…merely utiliz[ing] the achievements of development rather than providing an impetus for modifying its course. (p. 79)

Vygotsky argues that "the conception of maturation as a passive process cannot adequately describe these complex phenomena. Nevertheless…[in] our approaches to development we continue to use the botanical analogy in our description of child development" (p. 20). Despite the usage of such terminology like "kinder*garten*," says Vygotsky, humans are not plants, nor are they passive slaves to a predetermined schedule of development: "A child's perception," he writes, "because it is *human*, does not develop as a direct continuation and further perfection of the forms of animal perception, not even of those animals that stand nearest to humankind" (31).

As a linguist, Vygotsky used the arena of language development in which to challenge previous theories of development. Piaget, for example, believed that language began as internal speech and worked its way outward to social speech, while Vygotsky contended that *all* speech is social, and internal speech is social speech that is eventually internalized. Vygotsky highlighted the influence of external factors:

> Essentially, the development of inner speech depends on outside factors; the development of logic in the child, as Piaget's studies have shown, is a direct function of socialized speech. The child's intellectual growth is contingent on his mastering the social means of thought, that is, language…The later stage (inner speech to verbal thought) is not a simple continuation of the earliers [sic]. *The nature of the development itself changes,* from biological to sociohistorical. Verbal thought is not an innate, natural form of behavior but is determined by a historical-cultural process and has specific properties and laws that cannot be found in the natural forms of thought and speech. (p. 51)

Vygotsky's theories of language, of course, predate those of Noam Chomsky and the

transformational theories of grammar that follow, but the influence of historical-cultural

systems in learning is one that continues to inform contemporary constructivist theory.

Contemporary constructivists also know not to misread Vygotsky's words—"determined

by a historical-cultural process"[5] —as Vygotsky arguing for some sort of complete social

determinism in human development. Vygotsky scholar Harry Daniels (Daniels, 1996)

recounts how:

> …much of the work in the West has tended to ignore the social beyond the
> interactional and to celebrate the individual and mediational processes at the
> expense of a consideration of the socio-institutional, cultural, and historical
> factors. Ideological differences between the West and East have given rise to
> differences in theoretical development and of course pedagogical application.
> (p. 9)

Even in a post-Cold War era, a certain discomfort appears to remain in the West with

theories that do not place the individual in a privileged position over social forces. A

recent article (Blunden, 2006) notes how several contemporary critics (Billett, 2006, p.

53; Stetsenko, 2005, p. 70), "have touched on the issue of the need for psychology in

general, or Cultural-Historical Activity Theory[6] in particular, to better reflect the capacity

of individuals to exercise genuine agency alongside larger social forces." Blunden

worries that:

> Failing a more *critical appropriation* of the concepts of cultural and social
> formations involved in the constitution of consciousness, psychology risks erring
> in the direction of objectivism, casting individuals as creatures of the culture and
> institutions within which they live, minimizing the way in which people create
> their own lives, inclusive of the culture and social formations which condition
> them.

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5   Even more inflammatory to a Cold War era Western audience might be Vygotsky's assertions later in that same chapter about how the development of human speech is "governed essentially by the general laws of the historical development of human society" (p. 51). Ironically, despite these echoes of Marx here and elsewhere that made Vygotsky so unpopular in the West, Premier Stalin judged Vygotsky's work to be in such *insufficient* keeping with the principles of Communism so as to be stricken from publication.

6   In my experience, some hardcore Vygotskians seem to prefer to replace the term "Social Constructivism" with "Social Historical Activity Theory" in their belief that this term more accurately reflects Vygotsky's Marxist-influenced notions of the role that not only present conditions but past socio-history plays in an individual's development.

Vygotsky, however, would be the last person to "minimize" the role individuals

play in "creating their own lives" while interacting with culture. Furthermore, Vygotsky

would likely not use the word "condition;" for Vygotsky, culture did not "program"

individuals any more than individual biology proceeded absent of any cultural influence.

In his understanding, the two factors engaged in a *dialectic*, a continual series of

interactions which influenced one another. In the words of one Vygotsky scholar:

> The issue [in Vygotskian theory] is not whether one should begin with cultural
> tools or with the individual. Instead, it is one of understanding the fundamental,
> irreducible tension between these two aspects of mediated action which are
> analytically distinct but inextricably connected in reality. One the one hand,
> cultural tools cannot play any role in human action if they are not appropriated by
> concrete individuals acting in unique contexts. On the other hand, we cannot act
> as humans without invoking cultural tools. (Wertsch, 1993, p.170 in Daniels, p.
> 18)

A pair of contemporary Australian scholars (Liu & Matthews, 2005) also attempt to

expose what they see as confusion among Vygotsky's detractors. Their thorough

review of contemporary critics of constructivism comes to the same conclusion as

Daniels above: that those critics by and large misunderstand Vygotsky and create a

false dichotomy between individualism and social influence, a kind of "Cartesian

dualism" which Vygotsky himself would have been the first to reject:

> The irony now appears to be that from the divergence of constructivist views has
> emerged a dualist position— the very position constructivism came into being to
> avoid. By arguing for individual or social construction of knowledge a Cartesian
> parallelism between individual and social idiosyncrasy has arisen. This is most
> clearly seen in popular accounts of constructivists and their recent critics…the
> philosophical rigour underpinning Vygotsky's works has not been widely
> recognised in popular literature. We suggest that the historical-dialectical-monist
> philosophy characterising Vygotsky's theory is at odds with the dualist
> approaches inherent in many popular accounts of constructivism and their
> criticisms….confusions about Vygotsky's theory often arise from concepts taken
> literally and from the lack of appreciation of the general philosophical orientation
> underpinning his works. (p. 386-7)

In short, they conclude that "popular literature on constructivism and its critical comments has tended to apply a dualist framework incongruent to the monist philosophy guiding Vygotsky's writings" (p. 389). Arguing about whether the individual or the social weighs in more heavily into the equation misses the point that for Vygotsky, the very act of that dialectic, of that mediation, is what matters.

Even a Piaget *vs.* Vygotsky dualism is in many ways a false one. Vygotsky notes how Piaget himself noted the interrelationship between student and instruction/environment:

> [Piaget writes that] "nothing is more suitable to the technique of history teaching better than the psychological study of the child's spontaneous intellectual tendencies." But in the very same chapter an investigation of these spontaneous intellectual tendencies in children brings the author to the conclusion that what children's thinking really requires is the same thing that makes up the basic goal of history teaching, i.e. a critical and objective approach, and understanding of interdependencies and an awareness of relationships and stability. (Vygotsky, 1934, in van der Veer & Valsiner, 1994, p. 364)

Piaget, however, interprets this relationship as one of "antagonism" between teaching/learning and development. For Piaget, a new or seemingly different idea puts the child in a state of disequilibrium, after which she accepts it whole, accepts it with a modification, or dismisses the new idea entirely. Vygotsky "would counter…by putting forward another assumption which suggests that, so far as concept formation is concerned, not antagonism but relations of an infinitely more complex nature should exist between the processes of education and development" (p. 365), a synthesis as opposed to an antagonism. The differences are this: for Piaget, a child with a new idea is either achieving victory, surrendering, or negotiating some compromised peace, seeking to remain in cease-fire until the next assault. For Vygotsky, the child perpetually exists at

the negotiating table, with "battle lines" permeable and interchangeable, and military uniforms influenced by the fashion trends of the other side, even as the battle rages.

This ability to synthesize is what separates humans from animals, according to Vygotsky's work in *Mind and Society* (1978), in that "the basic characteristic of human behavior in general is that humans personally influence their relations with the environment and through that environment personally change their behavior, subjugating it to their control" (p. 51). In other words, animals do not alter their environment by creating signs and structures, which in turn shape a new environment, which will in turn influence the animals' behavior further. Humans do this, setting up the back-and-forth dialectic between self and society:

> The mastering of nature and the mastering of behavior are mutually linked, just as man's alteration of nature alters man's own nature…Just as the first use of tools refutes the notion that development represents the mere unfolding of the child's organically predetermined system of activity, so the first use of signs demonstrates that there cannot be a single organically predetermined internal system of activity that exists for each psychological function. The use of artificial means, the transition to mediated activity, fundamentally changes all psychological operations just as the use of tools limitlessly broadens the range of activities within which the new psychological functions may operate. (p. 55)

For Vygotsky, it is precisely this mediated activity that permits learning and shapes development in academic settings. Just as Vygotsky does not accept Piaget's theory that learning and development are independent entities, neither does he believe that "learning is development" (p. 81), criticizing reflex theorists whom he says believe that both "occur simultaneously; learning and development coincide at all points in the same way that two identical geometrical figures coincide when superimposed." Neither still is he satisfied by the latter-day reflex theorists like Thorndike (1931) and Woodward (1998), who point to different development of different skill processes, or by Koffka and

the Gestalt theorists (Koffka, 1922) who argue for learning as a generalized capacity to think, "an intellectual order that makes it possible to transfer general principles discovered in solving one task to a variety of others tasks" (Piaget, 81).[7]

In Vygotsky's view, learning and development influence one another, and do so while both influencing and being influenced by the environment. Vygotsky relates in *Thought and Language* (1962) his disappointment with what he perceived to be the insular nature of his society's views on the development of children absent any theorizing about those environments in which they learned:

> Most of the psychological investigations concerned with school learning measured the level of mental development of the child by making him solve certain standardized problems. The problems he was able to solve by himself were supposed to indicate the level of his mental development at the particular time. But in this way only the completed part of the child's development can be measured, which is far from the whole story. (p. 103)

Vygotsky's own experiments focused on the role of one particular kind of social mediation – teacher intervention and assistance. What he called "the most essential feature of his hypothesis" based on this research was this: "developmental processes do not coincide with learning processes. Rather, the developmental process lags behind the learning process" (p. 91). In other words, a child's biological capacity for performing certain tasks *limited*, but did not *define*, what that child could learn, thanks to the availability of social interactions. In his experiments he saw that, alone, students could seldom perform tasks too advanced for their age level. However, when a student was aided in tasks by a teacher or another individual with greater experience and problem-solving capabilities, then that student could perform some tasks well above those expected of his or her age level.

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[7]   To be fair, Piaget includes parts of this idea in his idea of formal thinking, but he and Inhelder alike said that it was not totally generalizable.

Having found that the mental age of two children was, let us say, eight, we gave each of them harder problems than he could manage on his own and provided some slight assistance: the first step in a solution, a leading question, or some other form of help. We discovered that one child could, in co-operation, solve problems designed for twelve-year olds, while the other could not go beyond problems intended for nine-year olds. (Vygotsky, 1986, p.186-7)

Vygotsky constructs from this research his now famous theory of the Zone of Proximal Development (ZPD) which he defines as "the discrepancy between a child's actual mental age and the level he reaches in solving problems with assistance." His research indicated that "the child with the larger zone of proximal development will do much better in school."[8]

It is not merely that instruction can help a child learn more than she could otherwise. For Vygotsky, *all* learning takes place because of the instructional/biological relationship. In his experiments, he continually introduced "problems" and "complications" into the assigned tasks, and noted how the interference and the interplay between the children and the problems led them to develop new lines of thinking. The idea of the development of high-level concepts happening on some preplanned biological timetable seemed absurd to Vygotsky. He concluded that "concepts are always formed during a process of finding a solution to some problem facing the adolescent's thinking process" (Vygotsky, 1931, in Van der Veer & Valsiner, 1994, p. 257).

All of this reinforces the basic social constructivist idea, which Vygotsky articulates in *Mind and Society* (1978), that: "human learning presupposes a specific social nature and a process by which children grow into the intellectual life of those around them" (p. 88). Animals, says Vygotsky, can imitate, but they can never *learn*,

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[8] For a discussion of how this theory intersects with contemporary neuro-biological understandings of the building of neural capabilities through modeling and practice, see Brandsford et al., 1999)

because learning requires the kind of two-way social and environmental interaction of which only humans are capable.

It is upon these products of Vygotsky's theories that much of School Climate research seems to be based: the idea that, when certain conditions (a certain kind of teacher-student or student-student interaction, or certain physical classroom arrangements) are present, a child is capable of learning more (and perhaps achieving higher scores on learning assessments) than when other conditions are present. While this may seem like a self-evident idea to many classroom teachers who can bear daily testament to the effects on their classes of, say, the presence or absence of a particularly disruptive student, or of a helpful assistant teacher, the more complex nature of these interactions is not generally understood or explored in education policymaking.

Two contemporary social learning theorists (Lave and Wenger, 1991) note that

[t]ypically, theories, when they are concerned with the situated nature of learning at all, address its sociocultural character by considering only its immediate context. The activity of children learning is often presented as [merely] located in instructional environments and as occurring in the context of pedagogical intentions whose context goes unanalyzed…[but] "locating" learning in classroom interaction is not an adequate substitute for a theory about what schooling as an activity system has to do with learning. (p. 147-8)

They argue that:

if participation in social practice is the fundamental form of learning, we require a more fully worked-out view of the social world…about the sociocultural organization of space into places of activity and the circulation of knowledgeable skill; about the structures of access of learners to ongoing activity and the transparency of technology, social relations, and forms of activity; about the segmentation, distribution, and coordination of participation and the legitimacy of partial, increasing, changing participation within a community; about its characteristic conflicts, interests, common meanings, and intersecting interpretations and the motivation of all participants vis-a-vis their changing participation and identities…. (148)

This is key to School Climate research, which attempts to do just what Lave and

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Wenger suggest. School Climate research studies interactions between students and their environment, defining "environment" not only as inanimate factors but also, particularly, as the interplay between students and between students and teachers. Vygotsky (Vygotsky, 1934, in van der Veer & Valsiner, 1994) maintains that "concepts do not simply represent a concatenation of associative connections assimilated by the memory of an automatic mental skill, but a complicated and real act of thinking which cannot be mastered by simple memorization," and considers the idea that "a child acquires concepts in their finished state during the course of his schooling" to be "totally inadequate" (p. 356). Vygotsky had harsh words for the kind of "skill and drill," non-interactive approach that Dewey so harshly criticized in the United States, calling it "the replacement of the acquisition of living knowledge by the assimilation of dead and empty…schemes, represent[ing] the most basic failing in the field of education" (p. 357). Vygotsky believed that, because of the ZPD, children really *learned* concepts through problem solving, aided by teachers and fellow students.

In the century since Vygotsky's experiments, many latter-day researchers have found supporting evidence for his ideas. The American psychologist Jerome Bruner, for example, adapted much of his theories about "scaffolding" (the ability of teachers to aid student learning through support and brokering of complex concepts) from Vygotsky's ZPD (Stokes, 2007). This paper cannot do justice to all of the researchers who have experimented with these ideas but will list a few to give a sampling of the diversity of realms in which the ZPD has been explored and tested in the contemporary era: Students utilizing the ZPD in the form of "peer social dialogue integrated with teacher support" showed improvement in word recognition, fluency, and self-evaluation (Dixon-Krauss,

1995). Aljaafreh and Lantolf (1994) outline the supporters and detractors of the ZPD as

applied to the use of negative feedback in acquiring a second language. Salomon,

Globerson, & Guterman (1989) found that computer-based learning tools can serve to

create a ZPD which resulted in increased reading comprehension scores for seventh

graders. The ZPD has been applied to so-called "moral education" and character

development (Tappan, 1998) in children, and the ZPD has been shown to benefit adults,

such as science teachers who participated in constructivist-based graduate-level methods

courses (Jones, Rua & Carter, 1998).

> One researcher (Hedegaard, 1990) concluded that

> The zone of proximal development must be used as a tool for class instruction. In our teaching experiment, we saw that it is actually possible to make a class function actively as a whole through class dialogue, group work, and task solutions. The teaching experiment differed from traditional instruction in that the children were constantly and deliberately forced to act. The children's research activity was central in these guided actions, which gradually led the children to critical evaluations of the concepts…. (p. 191-2)

However, one only need walk through today's classrooms in the United States to see

the comeback (if it ever left) of rote memorization and drilling , a direct response to

outcome and standards-based education as it was discussed in the introduction of this

paper. See Liu and Matthews (2005) for a tour of research that supports and advocates

for such structures, including how:

> Fox (2001) observed that in its emphasis on learners' active participation, it is often seen that constructivism too easily dismisses the roles of passive perception, memorisation, and all the mechanical learning methods in traditional didactic lecturing. Other researchers (Biggs, 1998; Jin and Cortazzi, 1998) have noted that while constructivist teaching approaches, including one-to-one or small group classroom interaction, do not always guarantee teaching effectiveness, traditional didactic lecturing in large classes of 50 to 70 students in China has not always meant the doom of teaching efforts. (Liu and Matthews, 2005)

A constructivist would argue, however, that none of these cases can be examined absent the conditions in the classroom and society at large. The very fact that large class lectures succeed in the studied communities in China[9] where they do not in many American schools indicates that other factors influence learning. Therefore, a teacher who does not capitalize on environmental interaction limits her ability to teach, surrendering to the conditions of the time and ignoring the facts that #1) those conditions play a role in her students' learning, and that #2) those conditions are alterable, and some alterations could conceivably improve her students' acquisition and development of skills and concepts.

Constructivist learning theory has many contemporary detractors, but their critiques mainly revolve around extreme interpretations of constructivism that represent the fringes of the theoretical movement. Part of the contemporary backlash against such ideas may stem from a perception that, until the 1990s, constructivist theories dominated educational discourse. According to one critic (Phillips, 1995):

> Across the broad fields of educational theory and research, constructivism has become something akin to a secular religion. … constructivism, which is, whatever else it may be, a "powerful folktale" about the origins of human knowledge. As in all living religions, constructivism has many sects— each of which harbours some distrust of its rivals. This descent into sectarianism, and the accompanying growth in distrust of nonbelievers, is probably the fate of all large-scale movements inspired by interesting ideas…. (p. 5)

Good, et al. (in Tobin, 1993) similarly caution that constructivism will only prove useful in science education when there is "a confrontation with the real differences that exist among different constructivisms" (p 84).

The exploration of such differences and "sectarian rivalries" is not relevant here,

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[9] I question, however, to what degree (in terms of Bloom-taxonomic-level) of understanding they succeed. The ability to do well on standardized tests does not necessarily reflect the development of higher order thinking skills.

however. Most of the debate appears to take place on very abstract epistemological

levels that do not seem to differ on the basic principles discussed already in this paper.

While there are indeed some more radical social constructivists, for example (Elkonin,

1971, and Aries, 1982 in Hedegaard, 1990), who argue that childhood itself is a social

construction, that children before the eighteenth century were treated as and thus behaved

like little adults, and that much of what we think are biological stages of development are

in fact socio-historically determined. More moderate constructivists, not to mention

contemporary brain researchers, upon whom this paper builds its framework (Hedegaard,

1990), merely point out that

> Although each child is unique, children obviously share common traits with other
> children…a child is unique and individual, but children's individualities have
> common features. If these features are not developed, we tend to regard the child as
> deviant…. (p. 191-2)

Far from Phillips' fear of an orthodoxy that persecutes heretics, Hedegaard characterizes

constructivism as a way in which to make sure individual children are *not* ostracized and

marginalized. In Hedegaard's words:

> To work with the zone of proximal development in classroom teaching implies that
> the teacher is aware of the developmental stages of the children and is able to plan
> for qualitative changes in the teaching towards a certain goal. Being of the same
> tradition, children in the same class have a lot of knowledge and skills in common.
> Instruction can build upon these common features if it takes into account that
> children vary in their speed and form of learning. (p. 191)

The constructivism I am concerned with is the mainstream Vygotskian model,

which does not argue that individuality or biology plays no role in human development,

not even in its more extreme (and least palatable to critics) forms like Wenger's

Communities of Practice. In this book, Wenger argues that individual identity

development itself cannot be extricated from the social: "We cannot become human by

ourselves," he writes, and "hence a reified, physiologically based notion of individuality misses the interconnectedness of identity" (p. 146). Even here, Wenger does not deny individuality as a concept, but rather that "it is a mistaken dichotomy to wonder whether the unit of analysis of identity should be the community or the person. The focus must be on the process of their mutual constitution."

Again, however, this paper will not go as far as to present all students as socio-community "units," but it must be understood that the paradigm it employs is one that refuses to recognize a child as an island unto herself. Her learning and development in class is no more dependent on inalienable, individual qualities as it is completely determined by her socio-historical context; rather, in Vygotskian fashion, it is the product of the interactions and interplay between the two.

Contemporary neuroscience (Bransford et al., 1999) yields physical evidence that brain activity during learning happens in an extremely complex fashion, in several different areas (the development of declarative knowledge, for example, produces recordable effects in the hippocampus, while procedural knowledge manifests as activity in the neostriatum). In short, "research has…indicated that the mind is not just a passive recorder of events, rather it is actively at work in both storing and in recalling information" (112). Recall, for example, is affected by environmental conditions and stimuli and can be enhanced or befuddled with the right environmental prompts. More interesting still from a Vygotskian perspective, "there is growing evidence that both the developing and mature brain are structurally altered when learning occurs" (114). The individual's brain and neurological pathways undergo physical, measurable change during the learning process, change that varies depending on the stimuli during learning.

Another possible reason why constructivist ideas might be unsettling enough to lead to continued misunderstanding of dialectical theory, according to Daniels (1996), may be because

> the very idea of mediation carries with it a number of significant implications concerning control. In that the concept denies the possibility of total control through external or internal forces it carries with it intellectual baggage which is potentially highly charged, especially in the political context in which these ideas were promulgated. (p. 7)

The role of teacher, according to Paulo Freire, is not to control, but to recognize the power of *mutual* influence. As he explains in *Pedagogy of the Oppressed* (2000), a teacher who recognizes this "is no longer merely the-one-who-teaches, but [also] one who is himself taught in dialogue with the students, who in turn while being taught also teach. They become jointly responsible for a process in which all grow" (p. 67). As we will shortly examine, School Climate research seeks ways to exploit that partnership for the benefit of students and teachers alike.

This paper has been using the phrase "School Climate" but as of yet has not defined it in any terms beyond its status as being informed by constructivist ideals. The New York based Center for Social and Emotional Education (CSEE), founded in 1996 at Teachers College, Columbia University, offers the following definition of school climate:

> Although researchers and practitioners use somewhat different dimensions (e.g., the "tone" or "atmosphere" of the school), virtually all agree that school climate refers to the quality and character of school life…[it is] based on patterns of students', parents', and school personnel's experience of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures. (CSEE, 2007)

Sackney (1988) offers a thorough tour of various articulations of school climate in the Canadian literature, where the discipline seems to have evolved not only from educational but also business/organizational contexts, and various models include

everything from physical ecology to social milieus to group-subcultures and "we feelings" to overall "school ethos." Sackney's own monograph settles on the following definition:

> …a relatively enduring quality of the internal environment of the school that: (a) is experienced by the members (students, teachers, administrators, secretaries, consultants and custodians), (b) influences their behavior, and (c) can be described in terms of the values, norms and beliefs of a particular set of attributes of the school.

Even with such broad definitions, how much of a role does School Climate even play in student achievement? Recall that Social Constructivism sees a continual dialectic between individual and social/environmental conditions as the locus for learning; by that definition, "environment" always matters. But who is to say that the influence of *school* environment in particular matters more than, for example, family environment, or the conditions brought about by one's racial or ethnic heritage? Good and Weinstein (1986) contend that "research shows that the school a student attends can make a substantial difference in the education received; schools are not interchangeable" (p. 1090). They rebuff critics (specifically, Averh, Carroll, Donaldson, Kiesling & Pincus, 1974) who say there is insufficient evidence to connect resources and other inputs to a school with student outcomes, arguing instead that "the utilization of resources was far more important than the level of resources available." In other words, what a school *does* with its resources, the specific climate it creates, is what must be examined in terms of correlation with student achievement. In their own survey of studies, they conclude that "variation in achievement among schools serving similar populations is often substantial and has significant implications for school policy" (p. 1096). Literature from the UK also supports this idea: for example, a three-year longitudinal study of secondary schools

in London and Isle of Wight in the 1970s (Rutter, 1979) concluded that "Children's academic attainment was…strongly and consistently associated with school process influences, even after other variables had been taken statistically into account" (p. 175).

In the past 30 years, a host of studies have emerged affirming that "school climate is thought to be linked to educational outcomes, especially achievement" (Pallas, 1988, p. 541). Haynes, Emmons and Ben-Avie (1997) list nine studies that correlate school climate and achievement, while Cohen, et al. (2009) cites five studies not listed in Norris, et al.'s article. According to Haynes, et al., this research is empowering in the face of socially deterministic theories, especially involving poor and minority students who some policy makers would suggest are doomed, educationally speaking, in any scenario that does not involve the radical alteration of their socioeconomic conditions. Seeing connections between school climate and achievement allows us to focus "not only on student background and motivational factors but also on school context and the quality of interactions among and between students and teachers as explanations of student academic achievement" (p. 322). In fact, several studies they cite indicate that school climate has a greater affect on African American student achievement than on that of white students. Freiberg (1999) assembled a list of international contributors with data from the USA, UK, Australia and Holland which supports the idea that, "like a strong foundation in a house, the climate of a school is the foundation that supports the structures of teaching and learning."

The next logical question then becomes: What *kinds* of socio/environmental conditions in school climate foster learning and achievement at high levels?

2.3 The P-Factors

As might be expected, "learning theory does not provide a simple recipe for designing effective learning environments; similarly, physics constrains but does not dictate how to build a bridge (e.g., Simon 1969)" (Bransford et al., 1999, p. 119).

This section will review the relevant literature on the environmental characteristics present in successful learning environments. "Success" here will be addressed both in terms of the outcome-based standards of increased achievement on standardized assessments, and in the CSEE model, where "a sustainable, positive school climate fosters youth development and learning necessary for a productive, contributing and satisfying life in a democratic society." There is no dichotomy necessary here regarding those two definitions of success; school climate theorists would argue (as we shall see) the latter is a precondition for the former.

Patterns began to emerge in this literature search, and those patterns formed the basis for defining the P-Factors, which, once again, are:

1. A sense of comfort, safety and security, both physical and emotional

3. Cooperation and connection within school communities

3. Cooperation and connection with communities and ideas beyond the classroom

4. Opportunities for critical thinking, especially perspective-taking (the ability to try and see events from another's point of view) and metacognition (engaging in critical reflection on the process of one's own learning)

Arguably, these are not even separate factors, but components of a greater whole, and indeed one component enables and reinforces another in feedback loops: cooperative

classrooms generate the kind of connectedness that makes for emotional comfort and feelings of acceptance. Physical safety is a prerequisite for cooperative environments, which can in turn create more physical safety. Connectedness with communities outside the classroom create the kind of "real life" relevance that motivates and engages students and makes relevant the acts of critical examination and metacognitive reflection on the processes that create all of these environmental conditions and refine them, reinforcing the whole system.

This paper, however, will break the P-Factors down into their component parts because that is how they most often appear in existing research:

1. Comfort and Safety

Comfort and security, both physical and emotional, seem to be commonly held conceptions of what constitutes the kind of school climate that promotes learning and high achievement. The grounding for this theory could be said to begin with Maslow (1943) and his theory that human beings have a hierarchical set of basic needs which must be progressively satisfied before they can address "higher" needs. In Maslow's view, a person's "deficiency needs" for physiological satisfaction (food, water, sleep, and basic homeostasis) and safety from physical or emotional harm must be met before addressing any higher-order, "growth" needs like learning complex declarative and procedural knowledges in a classroom.

These ideas are supported in subsequent research on school climate: Marzano, et al. (1997), have collected a body of research that supports the idea that "A student's sense of comfort and order in the classroom affects his or her ability to learn. Comfort and order as described here refer to physical comfort, identifiable routines and guidelines for

acceptable behavior, and psychological and emotional safety" (p. 23). Their definition of "comfort" is a wide one, beginning with the physical conditions around them:

> A student's sense of comfort in the classroom is affected by such factors as room temperature, the arrangement of furniture, and the amount of physical activity permitted during the school day. Researchers investigating learning styles (e.g., Carbo, Dun & Dunn, 1986 ; McCarthy, 1980, 1990) have found that students define physical comfort in different ways. Some prefer a noise-free room; others prefer music. Some prefer a neat, clutter-free space; others feel more comfortable surrounded by their work-in-progress. (p. 23)

The recommendation in this review, as in elsewhere (NASSP, 1996), is that "the physical setting of a high school should nurture a student in much the same way that the clean, safe interior of a home makes the youngster feel comfortable and secure" (p. 34).

Security derives from more than just the physical plant. Steve Wessler, Director of the Center for the Prevention of Hate Violence at the University of Southern Maine, argues that "a young person who does not feel safe and valued will find it difficult or even impossible to focus on academics or relationships with classmates" (Wessler, 2003, p.40). A host of studies demonstrate that students in violent school settings perform more poorly than students in safer settings. The following are samples of these studies.

Coleman (1998) analyzed base-year student data files from the 1988 National Education Longitudinal Study (NELS:88, which employed its own achievement tests) cross-sectionally to identify relationships between school violence and student achievement in reading and mathematics. The study addressed variables including school type (public/private, urban/suburban/rural) and racial/ethnic composition, and examined various types of violence: physical conflicts, verbal abuse, robbery/theft, vandalism, possession of weapons, substance abuse, and teacher-related violence. Coleman found that "when the incidence of negative personal behavior increases, there is a negative

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effect on achievement. Students experiencing victimization and students' perceptions of violence in their schools show lower levels of effect on achievement" (p. 7). Specifically, in a representative sample of schools (n=1051 schools), looking at 8th grade students (n=24,599) where on average, each school was represented by 25 randomly-selected core students, Coleman found when using T-tests (P>.05 = T.195) that students' personal behavior had a negative (-.188) relation to their scores on the NELS: 88 math achievement tests (p. 61). Their perception of violence in schools (.047) and their own experience of being victimized at school (-.021) were also statistically significant.

Gronna and Chin-Chance (1999) present their own literature review (which I excerpt here) of additional studies:

> Furlong and his colleagues (1995) found that students who had been victims of violence had lower grades and higher levels of perceived danger within schools than their non-victim peers. The researchers suggest that high levels of school violence may have a "generalized retarding effect on a child's development and overwhelm coping and protective factors naturally present in the student's life" (p. 294-295)...Based on the finding that extreme violence has been found to hinder cognitive, social, and emotional development (Furlong *et al.*, 1995; Harris, 1995; Prothow-Stith & Quaday, 1995), one can argue that an unsafe environment would hinder academic achievement. In more violent schools, students have less time to focus on academic activities as they are concerned about other factors and personal safety issues (Kimweli & Anderman, 1997; Prothrow-Sith & Quaday, 1995). (p. 3-4)

In greater detail: Furlong, et al. (1995) surveyed 6,148 students who ranked among the top 5 percent in terms of number of times they had self-identified as victims of violence on the California School Climate and Safety Survey (CSCSS). These "multi-victims" (n = 388) were then compared to students at the same schools who had no victimization experiences (n = 928) in terms of their average grades in their courses. Furlong, et al. found that victimization's effect on average course grades using MANCOVA analysis was $F(1,1208) = 19.1$, $p < .001$. When compared to the non-victims, the multi-victim

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students' averages were 3.57 (SD = 1.14) vs. 3.97 (SD = .94), where 3.0 equals a C

grade. In other words:

> About one third (33.1%) of non-victims reported getting A grades, compared to 22.8% of multi-victims. A similar pattern was found for Bs (38.5% vs. 34.3%). Multi-victims were more likely to report getting Ds (9.9%) and Fs (6.5%) than were non-victims (3.5% and 2.1%).

Heinrich, et al. (2004) also cite six additional studies not in Gronna and Chin-Chance's

list that "indi[cate] that children who report more incidences of witnessing and

victimization by violence do less well in school" (p. 328).

Jenkins and Bell (1994) found a correlation of .36 between witnessing violence

and self-reports of "trouble in school" for female African American high school students,

and that personal victimization had a .27 correlation for males. Bowen and Bowen

(1999), with a nationally-representative sample of 2,099 middle and high school students,

compared several variables to student in-class grades and found that

> the demographic variables explained a statistically significant proportion of the variance in the school performance variable—5.5% of the variance in self-reported grades. Adding the two measures of neighborhood danger increased the $R2$ for the equation by .040 for a total of .095. Effects were in the expected direction: as danger increased, grades went down. (p.331)

Harris and Associates (1995) conducted a survey for the National Teens, Crime,

and the Community Program (TCC) of 2,023 seventh through twelfth graders in public,

private, and parochial schools, and found that one third of students self-reported that

crime or the threat of crime negatively impacted their school lives and 12 percent

specifically blamed crime, or the fear of crime, for causing them to get lower grades than

they felt capable of earning.

Grissmer, et al. (1998) caution that while a rise in violent crime may correlate

with decreased standardized test scores for African American students, its importance

must not be overstated, but rather taken in context with a multitude of other factors. The

effect of school violence on achievement has been shown to change dependent on such

variables as school size (Commission on Business Efficiency of the Public Schools,

2003), parental support or lack thereof, and/or whether one is a witness to violence or a

direct victim (Henrich, et al., 2004). Heinrich, et al. argue that each form of violence

exposure has its own particular outcomes.

Still, there exists a substantial body of evidence that violent environments hinder

achievement. Although there is less evidence that a *safe* school correlates with *increased*

achievement, Gronna and Chin-Chance (1999) conclude from their own study:

> controlling for student background characteristics and differences in school
> conditions, students who are in safer schools have higher grade 8 achievement
> scores than students who are in less-safe schools. The results suggest that schools
> with lower levels of school violence provide better learning environments for
> students in middle-level schools. (p. 2)

Specifically, in their analysis of 46 of the 50 schools in one Western US state from 1993-

1996, with an n of 7,163 and using scores from the Stanford Achievement tests in

Reading and Mathematics, safer schools had higher test scores in mathematics (®=.12,

t=4.01 , p. <.001) and reading (®=.11, t=3.38, p. <.002) than unsafe schools:

> In other words, every one standard deviation increase in school safety produced a
> .12 standard deviation change in mathematical achievement. Similarly, for every
> one standard deviation increase in school safety a .12 standard deviation in
> reading achievement occurs. (p.13)

Positive and "safe" school climates, however, must go beyond the simple absence

of violence. Students require not only physical comfort and safety but emotional and

psychological safety as well; their school environments must reinforce norms of safety

and consistency.[10] Marzano, et al. (1997), among many others, reaffirms the idea that students learn best in environments with consistent routines: "research shows…that explicitly stated and reinforced rules and procedures create a climate that is conductive to learning. If students do not know the parameters of behavior in a learning situation, the environment can become chaotic" (p. 23). For example, Emmer and Evertson (1979) studied 27 third-grade teachers in eight elementary schools and found that the students of teachers who implemented clear, regular routines in their classrooms had higher engagement ratings (based on observable behaviors tested for reliability) than those in less structured classrooms, as well as higher scores on the California Achievement Test for reading (all correlations were greater than .05, and thus statistically significant).

Bransford, et al. (1999) also view climate (they employ the term "environment") as dependent on norms: "Different classrooms and schools reflect different sets of expectations…[and] different norms and practices have major effects on what is taught and how it is assessed" (p. 145). These norms, in their analysis, include classroom management rules both explicit and implicit about speaking, asking questions, behaviors that are rewarded or punished, and paradigms of competition versus community. The analysis of Bransford, et al. stresses the importance of factoring in how these norms interact with cultural norms in the students' home or ethnic communities; in one of their examples, students bearing cultural identities which discourage distinguishing oneself from the crowd might experience public praise for their efforts as a hostile climatic

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[10]   There is a body of theory and research that maintains that, to service diverse populations, school communities must also reinforce norms of racial equity, multicultural appreciation, and *identity safety*. Claude Steele's experiments with what he calls "stereotype threat" demonstrate that African American students' academic success may be dependent on "trust that stereotypes about their group will not have a limiting effect on their school world" (Perry, Hiliard, & Steele, p. 122). The conclusion he draws from a variety of studies is that "underperformance appears to be rooted less in self-doubt than in social mistrust" (p. 124), and he calls for the creation of climates of "identity safety" to "weaken the sequelae of identity vigilance, mistrust [and] disidentification" (p. 125) that he feels lead to underperformance. Interestingly enough, his studies also show that White and female students suffer from stereotype threat, and benefit from climates where norms of fairness and equity are made explicit.

factor, while a student from a different cultural background might not. Overall, they

posit that, "at the level of classrooms and schools, learning seems to be enhanced by

social norms that value the search for understanding and allow students (and teachers) the

freedom to make mistakes in order to learn (e.g., Brown & Campione, 1994; Cobb et al.,

1992)" (p. 133).

A study (Lee & Smith, 1999) of 28,317 sixth and eighth graders in 304 Chicago

Public Schools found students who reported on surveys that the experienced a climate of

positive support from teachers, fellow students and community members, performed

better academically (as measured by the standardized Iowa Tests of Basic Skills) than

those who did not:

> [Among] students who received the lowest levels of social support, reading achievement rose on an average of 0.56 Grade Equivalents (5.6 months). Among these same students, math achievement rose 0.93 GEs (9.3 months). In contrast, among students who experienced high levels of social support, reading achievement increased on an average of 1.42 GEs (1 year, 4.2 months). Among these students, math achievement increased on an average of 1.67 GEs (I year, 6.7 months). Clearly, students who experience strong support from teachers, parents, peers, and members of their communities also learn more, even after taking into account previous levels of achievement and student background and school demographic characteristics. (p. 15)

Broken down by factor analysis, P scores for significance were .39 for support from

teachers; .39 for support from parents; .33 for support from peers; and .42 for support

from the community. Lee and Smith found that scores were even higher when social

support was paired with "high academic press" and a climate of high scholastic

expectations.

The combined weight of this research leads me to believe that, if I can find

evidence of norms of stability and high achievement in classrooms (indeed, the creation

of the former seems to enable, or at least go hand-in-hand with, the creation of the latter), along with other instances of good teaching, it may be possible to assume that, relative to less safe, less well-ordered classrooms, students will be learning more and achieving at higher levels. Therefore, if in a peace education program these conditions and norms are present, we may be able to conclude that this program will have a positive effect on achievement.

How are these norms established and reinforced? That is the subject of the next section.

2. Cooperation and Connection within School Communities

Among Maslow's (1943) deficiency needs, which must be met before growth is possible, are the emotional/psychological needs for love, acceptance/belonging, and the respect of others in the community. School climate research also supports this idea: "Students who feel accepted usually feel better about themselves and school, work harder, and learn better" (McCombs & Whisler, 1997, in Marzano, et al., p. 16).

In at least a few cases, students self-report greater engagement in their classes when this feeling is present. Whisler (1992) examined ten "high-risk" students who participated in multi-party empowerment workshops with teachers and adults, and while only 3 showed an improvement the next quarter in their grades for language arts, mathematics, reading science and social studies, all ten reported feeling more positive about school and their school community. Whitlock (2006) examines the idea of *connectedness* through literature review and through original research, concluding that students who feel "cared for, trusted and respected by collections of adults that they

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believe hold the power to make institutional and policy decisions," exhibit better

behavior and academic performance. Whitlock found that among 305 students in 19

classes from 8-12th grade there were statistically significant correlations between student

self-reports of engagement and their perception of having "meaningful input into school

policies and practices" (p.25-26).

This information may be more promising than it first appears. From a Vygotskian

perspective, feeling connected is not just a matter of making students "feel better"

without any other positive result. Truthfully, we should be concerned with students'

psychological and emotional well-being even if it did not affect academic achievement,

but data on cooperative learning suggests it indeed does. Because of the ZPD and the

interactional nature of learning, students who feel more comfortable together, who work

more closely together in connected communities, are actually capable of more advanced

learning than those who do not:

> …the ZPD is useful to explain, at least in part, why the phenomenon of
> collaborative problem solving or inquiry-based activities makes sense. Emerging
> adolescents may begin to connect to one another's thinking and to grasp concepts
> with the assistance offered by one of their more knowledgeable peers. (Albert,
> 2003, p. 60)

Albert bases her analysis of cooperative learning not only on Vygotsky but his American

successor Bruner, when he argues that

> [a] true act of discovery is not a random event (Bruner, 1973). It is deliberate and
> intentional. The learning community in which it is embedded influences the
> activity of problem solving…. (Albert, 59)

Definitions of "cooperative learning" vary, but most contemporary educational

definitions seem to pay homage to the work of Roger Johnson and David Johnson at the

University of Minnesota. According to Johnson and Johnson (1994), cooperative

learning involves more than just students being together in a group. There must be what

they call "positive interdependence," which is

> when students perceive that they are linked with group mates in such a way that
> they cannot succeed unless their group mates do (and vice versa) and/or that they
> must coordinate their efforts with the efforts of their group mates to complete a
> task…[t]here is a difference between simply having students work in a group and
> structuring groups of students to work cooperatively. A group of students sitting
> at the same table doing their own work, but free to talk with each other as they
> work, is not structured to be a cooperative group, as there is no positive
> interdependence.

Johnson and Johnson go on to specify that positive interdependence needs to be coupled

with individual accountability for each student's role in the group effort, as well group

accountability for goals:

> Each group member's efforts are required and indispensable for group success
> (i.e., there can be no "free-riders"). Each group member has a unique contribution
> to make to the joint effort because of his or her resources and/or role and task
> responsibilities.

To this end, Johnson and Johnson also list as prerequisites for true cooperative learning

the development and usage of interpersonal and small-group skills for communication,

coordination and conflict resolution within groups. Finally, *metacognition*, the act of

reflection on/processing how the group works, must be employed regularly for ongoing

improvement of the group's functioning. This paper will further discuss metacognition

later on.

So, in summary, cooperative learning as defined in this paper is

> …an instructional paradigm in which teams of students work on structured tasks (e.g.,
> homework assignments, laboratory experiments, or design projects) under conditions
> that meet five criteria: positive interdependence, individual accountability, face-to-
> face interaction, appropriate use of collaborative skills, and regular self-assessment of
> team functioning. (Kaufman & Felder, 2000)

What does the research bear out regarding cooperative learning's effects on

achievement? Baloche (1998) concludes that

When well-structured, learning goals that are designed to emphasize cooperation tend to promote higher achievement than learning goals that are designed to emphasize either individualism or competition. This is true in every subject, at all grade levels, and particularly when higher-level thinking skills are required (D. Johnson, *et al.*, 1981). Cooperative efforts result in better performance in problem solving than competitive efforts do. This is true at all grade levels (Quin, D. Johnson, & R. Johnson, 1995)…learning that is structured cooperatively tends to increase achievement for all students, and achievement results are particularly potent for some groups who are more cooperative in their cultural and social orientations (Kagan, 1980, 1992)." (p. 3)

In more detail, Quin, D. Johnson and R. Johnson (1995) examined 46 studies from 1929-1993 and found that members of cooperative teams consistently outperformed individual learners. The authors categorized the various forms of achievement measures in these studies into two categories: linguistic (problems solved through written and oral language), where the effect size was .37, and nonlinguistic (problems solved through symbols, mathematics or motor activities), where was .72. They also categorized the measures as either "well-defined" (problems with clear operations and solutions), where the effect size was .52, or "ill-defined" (problems with more open-ended or vague operations and solutions), where the effect size was .60.

Putnam (1997) reaffirms this research by citing the "best-evidence synthesis" technique used by Slavin (1990) to examine 68 studies on cooperative learning (there is some crossover between these studies and the ones described in the previous paragraph). Slavin found that 49 of the 68 comparisons (72 percent) were positive, favoring the cooperative learning methods, and only 8 (12 percent) favored control groups (p. 31). He also cites Johnson and Johnson (1989), in which the researchers used meta-analysis methodology to analyze 323 studies of cooperative work:

[T]he data indicate that achievement and productivity are higher when students cooperate than when they work individually or compete. The more methodologically rigorous the study was, the more powerful was the effect of

learning on achievement" (32). More than 50% of the findings were statistically significant in favor of competition, and only 10% in favor of competitive or individualistic learning – average cooperator performed above (about 3/5 a standard deviation) the average person working independently or competitively. (p.33)

Putnam does raise the caveat that most of this research has been conducted on lessons involving basic skills in spelling, math, and more research needs to be done on lessons involving advanced, higher order problem solving.[11]

Albert (2003) has already described, from a Vygotskian/Brunerian perspective, a possible reason for the positive effect of a cooperative climate on achievement. Baloche (1998) goes further to discuss how cooperative groups develop and reinforce norms, values and roles, which, assuming they are positive and generative ones, create a psychologically beneficial climate as well as an academically beneficial one. Baloche examines groups which are formed by teachers and administrators to establish consistent, helpful routines and positive norms. To be successful in promoting positive school climate, she argues, these groups should have stable, heterogeneous membership and meet regularly throughout the school year. Although Baloche doesn't use the term "social capital," she is essentially positing that participation in these groups increases social capital within a school community.

Social Capital, a term coined by John Dewey (1900)[12] and popularized recently by Robert Putnam's book *Bowling Alone* (1995), refers to "a sense of belonging and the concrete experience of social networks (and the relationships of trust and tolerance that can be involved) [that] can, it is argued, bring great benefits to people" (Field, 2003,

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[11] She also cites studies that demonstrate that individualist approaches seem to work better than cooperate ones in some specialized cases, such as adult learners acquiring simple motor skills.

[12] Pierre Bordieu (1986) in *The Forms of Capital* is generally credited with the first use of the term in its modern definition, but the initial coinage remains Dewey's.

"Social Capital"). As Beem (1999) presents it:

> The central idea is that "social networks are a valuable asset". Interaction enables people to build communities, to commit themselves to each other, and to knit the social fabric…trust between individuals thus becomes trust between strangers and trust of a broad fabric of social institutions; ultimately, it becomes a shared set of values, virtues, and expectations within society as a whole. (p. 20)

In this case, the "shared set of values, virtues and expectations" are that "all children and adolescents, in all schools, have the right to believe that they are valued by peers—that peers notice and care when they come to school and that peers notice and care when they do not come to school. Base groups are one way to build a sense of inclusion, respect, appreciation, and community into classroom life" (Baloche, 1998, p. 95).

Baloche also speaks about the role of "informal cooperative learning groups," the short term "communities" with random membership such as temporary discussion or activity groups that offer opportunities to bounce ideas off new people. What ties all of these groups together, she says, is Johnson and Johnson's idea of positive interdependence, that we all share mutual goals, even if those goals, in a diverse community, are, by necessity, differentiated.

How can academic cooperation function given the reality of vast heterogeneity in student ability, even within so-called tracked classes? According to Putnam (1997) and Slavin (1990), differentiation is the key to successful cooperative learning environments. Slavin's research concludes that successful cooperative learning must have equal opportunities for students at all levels to get points/rewards for improving – "one size fits all" doesn't work. But research differs as to the best kind of heterogeneous grouping and the best method of differentiation.

Putnam (1997) cites research that says low-performing students bring down the level of academic achievement in cooperative heterogeneous settings, yet they actually derived better social benefits (they are "liked more") in cooperative settings than competitive ones, even *if* they bring down the group attainment (p. 38). In terms of raising that attainment, she cites a study (Jones & Carter, 1994) of 30 fifth-grade science students in North Carolina that found that, if the group task goals are designed so that each student can learn something from the exercise (the task must "be designed for growth at different levels"), then pairing high-low students can be beneficial for all involved (Jones & Carter, p. 616, in Putnam, p. 38-39).

Mixed-ability grouping by itself, of course, is no panacea for low achievement. As early as the Coleman Report of 1966, research suggested that, while

> peer effects existed and were significant in shaping educational attainment – with students being seriously advantaged or disadvantaged depending on the quality of their fellow- classmates…it asserted, too, that those effects were non-linear – that the weak student benefited more from association with strong classmates than those strong students lost in associating with weaker classmates. (Zimmerman, Rosenblum & Hillman, 2004, p.2)

Without careful design of groups, mixed-ability grouping can have negative social consequences as well, as reviewed by Huss (2006):

> Gifted students…often feel exploited when cooperative learning is used as a predominate method of instruction and groups are configured heterogeneously (Coleman, 1994; Mills & Durden, 1992; Robinson, 1991). Fiedler, Lange, and Winebrenner (2002) likewise believe heterogeneous grouping may have negative side effects both on the gifted student and on the others in the classroom. Average or low-ability students may see their "perceptions of themselves as competent, capable learners suffer (Fiedler et al., p. 110)"

This discussion suggests that the kind of school climate involving cooperative learning which benefits achievement does not happen as a natural result of mixed-ability grouping; it requires specialized structures and skills which teachers must help students

acquire. Yet Slavin (1995, p.41), after reviewing 99 studies on cooperative learning, reports that "it is possible to create conditions leading to positive achievement outcomes by directly teaching students structured methods of working with each other (especially in pairs)" (in Putnam, 1997, p. 32).

If we can find these specialized structures for cooperative learning at work in the classroom, along with other indicators of good teaching, then based on the data we could reasonably assume that those students would be achieving at higher levels than students without the benefit of those structures. Therefore, if a peace education program includes these conditions, we may be able to conclude that this program will have a positive effect on achievement.

3. Connections to Communities and Ideas beyond the Classroom

Bransford, et al. (1999) stress the need to recognize the interfaces of school climate with the climate of students' greater communities (since, in their analysis, 53 percent of waking student time is spent outside of school vs. 14 percent in school). They also discuss the effect of television and other media as influencing "educating" forces, for good or ill, on student achievement and worldview. At all times, they argue, awareness must be maintained, and inclusion practiced, of all of these influences beyond the classroom. One of their four[13] key "environmental" (climate) prerequisites for an academically successful classroom is a learner-centered teaching approach: "culturally responsive, culturally appropriate, culturally compatible, culturally relevant" (p. 122),

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[13]   The two requisites not discussed here are that classrooms must also be *knowledge centered* (exposing students to a vigorous body of knowledge and not shying away from greater context of complex ideas) and *assessment centered* (providing regular, reliable, valid assessments that are not merely summative, but whose results students then apply towards improving their work).

where instruction is aimed at discovering what students think in relation to problems at hand, giving them situations to continue thinking about to further readjust their ideas. Teachers in learner-centered environments use "diagnostic teaching" to recognize the importance of, and to build upon, what the students bring to class, and then engage students in a cognitive conflict and then have discussions about conflicting viewpoints (echoing once again the Vygotskian problem-based style). Paulo Freire was well aware of this prerequisite when he conducted his literacy campaigns in developing nations, where he

> adapted his educational methods to the specific historical and cultural setting in which his students lived [and thus] they were able to combine their "spontaneous" concepts (those based on social practice) with those introduced by teachers in instructional settings. (John-Steiner & Souberman in Vygotsky, 1978, p. 131)

Another requisite is that classrooms be what Bransford, et al. call "community centered," helping students to make connections with "experts" outside of school and the ability to share their work with others in the community:

> Opportunities to prepare for [events that link school and greater community] helps teachers raise standards because the consequences go beyond mere scores on a test. (e.g. Brown &Campione, 1994, 1996; Cognition and Technology Group at Vanderbilt, 1997; Wiske, 197). (p. 137)

The benefits of community-interactional service-learning have been well documented; see Dufour and Eaker (1998)'s best practices manual and Ward and Wolf-Wendel (2000)'s literature review.

Some data also exists studying the developmental (and to a lesser extent, cognitive) benefits of service learning on college students: for example, one study (Astin, et al., 2000) collected data from 22,236 college students from a national sample, finding that, based on student reports, service learning had a significant positive correlation with

perceived improvement in writing skills, critical thinking skills, and GPA (but not, notably, with future standardized test scores like the GRE, MCAT or LSAT). See also the studies in Eyler (2000).[14]

Even absent actual involvement in communities beyond the classroom, a sense of connection between classroom material and the real world can reap benefits. Regarding math and science education in particular, Yager (1999) warns of "a schism between the explanations offered in schools and those accepted and used by students," and argues that "content comprising school programs must be related to the real world of students if it is to be useful." He references others (Simpson, 1963; Perrone, 1994) to explain how "concern for mathematics and science in the real world can…exemplify the visions in our current national standards."

Much of the data in these studies points to teacher and student reports of engagement as opposed to data on specific grades and scores, but given the interrelatedness of engagement to the previous two P-Factors, it is reasonable to assume that the presence of this factor as well could be an indicator of high achievement. Therefore, if a peace education program includes active connections between classroom instruction and the world beyond the classroom, student achievement may rise.

4. Critical Thinking: Perspective-Taking and Metacognition

The widely-used term "critical thinking" has been defined variously by different scholars, including the following examples:

> Critical thinking is the use of rational skills, worldviews, and values to get as close as possible to the truth. (Gabennesch, 2006)

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[14]   The groundwork for these ideas goes back at least as far as Maslow when he talks about the higher-order needs to demonstrate competence.

Critical thinking involves developing some emotional and intellectual distance between yourself and ideas—whether your own or others'—in order to better evaluate their truth, validity, and reasonableness. Critical thinking is an effort to develop reliable, rational evaluations about what is reasonable for us to believe and disbelieve…Critical thinking does not guarantee that we will arrive at truth, but it does make it much more likely than any of the alternatives do. (Cline, 1998)

Critical thinking is the examination and test of propositions of any kind which are offered for acceptance, in order to find out whether they correspond to reality or not. The critical faculty is a product of education and training. It is a mental habit and power…It is our only guarantee against delusion, deception, superstition, and misapprehension of ourselves and our earthly circumstances. (Sumner, 1940, p. 632-3)

There appears to be a debate among education scholars, as outlined in Davies (2006), as to whether Critical Thinking should be "understood as a subject specific discourse" (the *specifist* position, argued by Robert Ennis, Tim Moore, and others) or whether Critical Thinking should be "understood independently of disciplinary context" (the *generalist* position, argued by John McPeck and others). Davies argues for a combination definition.

Critical Thinking, for the purposes of this paper, will be defined as "the ability to evaluate your own perspective and the perspectives of others," which requires the two sub-set skills of Metacognition and Perspective-Taking, respectively. Ivey and Fisher (2006) argue against a strictly "back to basic skills" approach with below-level readers in secondary school, and in favor of combining a critical-thinking approach to produce better learning, and Auckerman (2006) concurs that a teaching approach that presents learning as a right/wrong, yes/no, zero-sum affair will not help students learn as well as a critical approach: "There is more to…pedagogy than a respectful, nonevaluative stance toward student ideas, that it is equally important to be a curious teacher. " She

encourages teachers by suggesting that when they "listen most closely to what at first seems 'wrong,' [they] may find, to [their] surprise, that [their] reading discussions turn out right" (p.40-41).

Research exists to support such claims, from diverse regions and grades (although the population sizes involved in most of these studies are troublesomely small): Connerly (2006) examined 19 fourth grade students in two sections, randomly selecting ten to receive additional critical thinking lessons. She found that students in the experimental group made larger gains on several experimenter-designed instruments than students in the control group. Scanlan (2006) examined 38 randomly-selected twelfth grade students at a diverse, primarily low-income San Diego high schools who were exposed to a nine-week unit in their English classes on critical thinking skills, then assessed in five areas and found improvement in the experimental group in the areas of Clarity (+.25), Analysis (+.5), Support (+1.0), Organization (+.75), *and* Grammar (+.5).

Reed (2006) examined the effect of integrating the Richard Paul model for critical examination in primary source document analysis into a U.S. history course at a community college, comparing an experimental group (n=29) of two classes to two control classes (n=23) taught in a more "traditional" manner. Students took three pretests and four posttests to measure the effectiveness of the instructional model: a Documents Based Question (DBQ) from an Advanced Placement Examination, the Ennis-Weir Critical Thinking Essay Test, the California Critical Thinking Dispositions Inventory (CCTDI), and a History Content Exam. Reed found that the experimental group scored significantly higher on the DBQ, $p = .004$, and on the Ennis -Weir, $p = .0001$. Effect sizes (Cohen's f) were DBQ = .48 and Ennis-Weir = .83. The Foundation for Critical Thinking

at Sonoma State University found a rise in SAT and ACT scores at an Omaha, Nebraska High School, to which they credit new curricular programs that emphasize critical thinking (Crook, 2006). Outside the U.S., Gurses, et al. (2007) used experimental studies to compare critically-focused, problem-based learning in Physical Chemistry classes at Atatürk University in Turkey with traditional instruction and found

> a statistically significant difference between the students' academic achievement and scientific process skills at $p < 0.05$ level…the results suggest that the PBL approach promoted critical thinking and problem-solving skills; active participation in the learning process including self-direction, identification of own learning needs, teamwork, creative discussion and learning from peers; and the integration and synthesis of a variety of knowledge.

Perspective-taking, an element of Critical Thinking, has been connected to higher grades in primary and secondary-school English and Social Studies classes (Stevahn, Johnson, D. W., Johnson, R. T., & Real, 1996; Stevahn, Johnson, D. W., Johnson, R. T., Laginski, & O'Coin, 1996; Stevahn, Johnson, D. W., Johnson, R. T., Green, & Laginski, 1997). Johnson and Johnson (1994) already detailed the importance of Metacognition in the continual examination and maintenance of cooperative learning environments, which Albert (2003) reinforces in her own work:

> In learning communities, metacognition encompasses awareness of what is to be learned, when and how it is to be learned, as well as self-knowledge of personal and intellectual qualities. The teacher scaffolds learning and understanding, gradually allowing the students to monitor and regulate their own learning of the material by deciding when to use a different approach or how to proceed to successfully complete a task. (p. 59)

She draws upon Bruner (1973), who sees instruction as

> …participat[ing] in the process that makes possible the establishment of knowledge. We teach a subject not to produce living libraries on that subject, but rather to get a student to think mathematically for himself, to consider matters as a historian does, to take part in the process of knowledge-getting. Knowing is a process, not a product. (p. 72)

Metacognition has been recognized as a key element in defining what it means to have "expertise" in a subject (Sternberg, 2004).

White and Frederiksen (1998) conducted a controlled comparison of the ThinkerTools Inquiry Curriculum, which, when it included metacognitive processes, increased student performance on scientific research projects and inquiry tests when compared to control classes. Turner (1993) found positive effects of metacognition-focused instruction on high-ability fifth-graders' performance on spelling tests. Lucangeli and Cornoldi (2000) examined 397 third-grade and 394 fourth-grade students in Italy, using researcher-designed assessments of metacognition and instruments called Emmepiu's Mathematics Tests:

> Subjects, instead of simply having to solve the items, were asked to perform the metacognitive operations of prediction: that is, to predict, before solving the item, whether it would be answered correctly or not... For planning, the subject was required to indicate the operations to be carried out and their order. For monitoring, the subject was required to indicate the strategies chosen to perform the task and to keep its execution under control. Evaluation required an operation symmetric to prediction, in this case regarding the knowledge of having given the right or wrong answer. (p. 125)

The researchers found a correlation between high scores on the metacognitive indicators (predication, planning, monitoring and evaluation) and performance on the math test: in most cases, third grade subjects with high scores on the former were between two and three times as likely to do well on the latter. In fourth grade, the correlations were much weaker for arithmetic but strong for geometry and problem solving.

Some studies (Lucangeli & Cornoldi, 2000; O'Neil, 1998) suggest that assessments of metacognition's effect on achievement grow more reliable when examining older students.

Some evidence seems to exist that the presence of student metacognition could be an indicator of high achievement; which one encourages the other is not entirely clear from the existing research, but if a peace education program includes a focus on metacognition we might expect achievement to rise.

5. Summary

As has been mentioned before, it is no coincidence that all of these School Climate factors—safety, cooperation, real-world connections, and critical thinking—are all correlated positively with student achievement. All of these factors are interdependent with one another. The same skills that students develop in cooperative learning environments, in Baloche's view (1998), aid them in their interactions in the real-world (beyond the classroom) achievement. She cites research to support the benefits for improved skills in democratic participation, better relationships with peers, and better physical and psychological health…which in turn connects back to physical and emotional safety. Cooperation, and the safety which is both necessary for it, and generated by it, is maintained by (and in turn stimulates) critical thinking. All of these elements enable the kinds of higher-order achievement that the outcomes-based movement desires from students, namely, to "understand the current state of their knowledge and build upon it, improve it, and make decisions in the face of uncertainty"—without being defeated by rigid kinds of climates that do not allow students to negotiate and develop these skills effectively (Talbert & McLaughlin, 1993 in Bransford et al., 1999, p.120).

A caution is in order, in that the studies discussed here do not all use the same measure of attainment. Studies that measured attainment through grades are subject to the confounding idiosyncratic differences in individual classroom and school methods of assessment, which may make generalization difficult. The same caveat holds true for the various forms of researcher-created instruments, and even, to a lesser extent, results on various standardized tests. Yet within standardized tests, by their nature, such scores are less permeable to change from any one experimental classroom intervention.

Yet the evidence that students seem to achieve better under a variety of different assessment standards could actually serve as stronger evidence of generalizability than if every researcher somehow used the exact same assessment method. Given how the experimental interventions discussed in this chapter showed increased attainment through *some* assessment methods, one can say with *some* confidence that there is *some* measure of positive correlation between certain school climates and student achievement. When schools establish norms that promote safety, cooperation, connection with the larger community and critical thinking, their students succeed (even if that success is measured by a variety of standards).

Hence the motivation for my study, to try and add some clarity to the many "*somes*" in this equation. This author seeks to test for affects on achievement one of the many programs currently existing that promotes these P-factors, programs that also share a common goal in creating peaceable spaces. Recall that the P-factors are not just about performance but also about peace; while these factors could well be present in programs and curricula that have no explicit connection to peaceable schools, the author is also seeking to address the problem of school violence and the promotion of nonviolent

conflict resolution skills in the next generation of Americans. Before beginning research, however, it is necessary to categorize these programs within the context of Peace Studies and Peace Education.

2.4 A Proposed Typology of Peace Education

Hundreds of programs exist in the US right now that claim to address violence prevention, peaceable schools, and peace studies for K-12 students of all levels. In 1999, Partnerships Against Violence's PAVnet website (Derzon, Wilson, & Cunningham, 1999) listed approximately 160 such programs (p 6). Today, that list has grown to almost 400 (PAVnet Online, 2007) and even that number cannot possibly account for all of the individual, unnamed or unadvertised principal and teacher initiatives going on beneath the radar. Far from the product of some counterculture movement by a gaggle of tie-dye wearing radicals, this renewed valuing of positive socio-emotional competencies has in fact been enshrined by several states as part of the standards and outcomes based climate created by No Child Left Behind.

The Illinois State Frameworks, for example, have a Social/Emotional Learning Strand with explicit goals for students to "develop self-awareness and self-management skills to achieve school and life success, use social-awareness and interpersonal skills to establish and maintain positive relationships, and demonstrate decision-making skills and responsible behaviors in personal, school, and community contexts" (Illinois State Board of Education, 1997). The Massachusetts State Frameworks require students to develop skills in "Mental Health, Family Life, and Interpersonal Relationships" so that they may learn "how to manage interactions with other people" (Massachusetts DOESE, 1999).

The New York State Frameworks require that "students will acquire the knowledge and ability necessary to create and maintain a safe and healthy environment" (New York State Academy for Teaching and Learning, 2003). Nationwide, teachers interested in exploring some form of peace education may now have not only the blessing, but the mandate of their Departments of Education.

Yet despite signs of a "Peace Education Renaissance," the disconnectedness of these hundreds if not thousands of efforts can be frustrating. At the university level, publications like the *Global Directory of Peace Studies and Conflict Resolution Programs* profile (as of 2007) 450 undergraduate, Master's and Doctoral programs and concentrations in 40 countries and 38 U.S. states. No such authoritative publication exists at the K12 level. The guidance counselor conducting a dating violence prevention program in Omaha may not necessarily feel a connection with the social studies teacher in Austin conducting lessons about Gandhi or the Serbian OTPOR resistance movement, and neither might consider themselves in the same line of work as the Spanish teacher in Boston who organizes a pen pal exchange between his students and their counterparts in Mexico City. All teachers face feelings of isolation once the classroom door closes, and for this reason, professional organizations like NCTE (National Council of Teachers of English), NSTA (National Science Teachers Association), NCSS (National Council of Teachers of Social Studies) and others seek to bridge those gaps between classrooms, cities and states, linking teachers through the ties of their discipline.

One could form disciplinary links between various kinds of programs that promote peace and/or nonviolent conflict resolution under the aegis of "Peace Studies" or "Peace Education." Since 1984, Peace Studies has been a field recognized by the United

States Government. The Peace Studies Association, the professional academic body of the U.S. Institute of Peace, was established three years later, and since that time at least six scholarly journals have been devoted to the field (Bucknell University, 2006)[1]. Definitions of Peace Studies vary across institutions and subfields, but all employ an interdisciplinary approach to study the human history and capability of settling conflicts without the use of violence, viewing war and violence not (entirely) as biological and inevitable realities of the human condition, but as products of social conditioning, which are potentially changeable. Additionally, "because violence often occurs as a result of conflicts related to economic and social inequalities, issues of justice are also considered a key component of the Peace Studies field" (University of North Texas, 2006).

While it is tempting to consider "Peace Education" as a content area specific to Social Studies classes, the goals of nonviolent conflict management, of the creation of peaceable spaces, is the goal of any school-based anti-violence, anti-bullying or anti-racism program. Every teacher wishes to create a safe space in his or her classroom, and students need to be taught skills and competencies toward that end.

Once again, hundreds of K12 programs nationwide claim to address social and emotional competencies, and many have been evaluated through research that shows they are succeeding in their aims. As mentioned earlier in this chapter, much of this research has itself been evaluated, with positive results. Yet few of these programs self-identify as "Peace Education." To my knowledge, neither the Institute of Peace nor anyone else offers an agreed-upon typology that helps us to label what kind of program qualifies as "Peace Education," or offers a system to categorize programs underneath that umbrella.

This is a shame, as a typology of Peace Education could be of great use for the purposes of program design and choice, curriculum development, teacher training, funding, and especially as a framework for researchers evaluating the efficacy of these programs. I proposed a typology of my own (Nurenberg, 2008), an "arbitrating key" that divides such programs into three primary categories: "Cultural Encounter" programs, "Conflict Resolution" programs, and "Academic" programs.

1. *"Cultural Encounter" programs*: These programs focus on bringing students from cultures in conflict into contact with one another for joint activities, in order that lines of communication (and eventually, bonds of friendship) will replace ignorance and mutual hostility.

   Examples:

   - The Seeds of Peace camp in Maine, which since 1993 has been bringing together Israeli and Palestinian teenagers, and more recently students from Pakistan and India, as well as Greece and Cyprus. "Treaties are negotiated by governments," says their website, "but peace is made by people. Seeds of Peace is doing what no government can. It is sewing the seeds of peace among the next generation of leaders" (Seeds of Peace, 2008).

   - MIT's MEET Program, where Israeli and Palestinian students work jointly on science projects. "The vision behind MEET is to use technology to create a common language between Israelis and Palestinians that can be translated into future cooperation between the communities…[T]he program is not about creating friendships. We want our students to see that, despite their political differences, they have common interests and can work together as professional

partners" (Binur in Richards, 2005).

- Concord-Carlisle High School's CCNN Japan Sister City exchange, where students from the U.S. and Japan travel to one another's homelands, stay with families, and maintain the bonds of peace between these two former "enemy" cultures.

- People-to-People Student Ambassadors, founded in 1956 by President Eisenhower to facilitate cultural exchange. This organization brings students from the U.S. to meet with their counterparts in other nations. In the words of his granddaughter, Eisenhower "believed that if people could visit each others' homes, attend their schools, and see their places of worship, then the misunderstandings, misperceptions, and resulting suspicions—which were making war a viable option—would disappear. He wanted people to know and understand that while we are all very different, our values, goals, and day-to-day issues are very much the same" (Eisenhower, 2007).

2. *"Conflict resolution" programs*: These programs are designed to help students develop tools for identifying and resolving conflicts. While Cultural Encounter groups almost invariably teach and foster these skills, they have a specific focus on cultural/national identity and history. The end product is a change in one's sense of cultural narrative in order to accommodate the humanity and legitimacy of someone from the "enemy" culture. Conflict Resolution programs, as defined here, do not need this historical context; they focus simply on getting kids to manage their anger and day-to-day conflicts, within their own culture as well as with members of "outside" groups. Instead of breaking down barriers of culture (although that may be

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an element of the process), the goal here is to help students develop alternatives to a socialization that taught them that name-calling, put-downs and slurs, social exclusion, pranks, fists, knives and guns are the traditional solutions to conflicts of interest within as well as outside of their culture. While the applications to large scale political relations may or may not be explored, the main focus is far more "local" and "everyday practical" for most American students. Indeed, the impetus for the creation or implementation of these programs is often a desire to reduce relational and physical violence within a classroom, school, neighborhood, or community. Often these programs involve creating classroom (or schoolwide) environments where conflict resolution skills are always present and practiced. Many times these programs help students develop greater participation in classroom and school decision-making as well.

Examples:

- Boston, MA's *Peace Games* targets urban inner city youth in the metro Boston area, aiming to "empower…students to create their own safe classrooms and communities by forming partnerships with elementary schools, families and young adult volunteers" (Peacegames, 2008). Peace Games promotes curricular and extracurricular programs in K-8 schools and their communities, "integrat[ing] peacemaking into school policies, procedures, and discipline methods;" they also provide professional development workshops for faculty and staff and outreach to students' families, creating a "shared peacemaking language and `feel'…through events, projects, and public documents."

- The *Teaching Students to be Peacemakers* curriculum, developed in 1960 at the

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University of Minnesota, is employed by schools nationwide. Its philosophy (Johnson & Johnson, 2006) is that "schools need to become conflict positive places where destructive conflicts are prevented and where constructive conflicts are structured, encouraged, and utilized to improve the quality of instruction and classroom life. To do so, students must be taught the procedures and skills they need to manage interpersonal conflicts constructively. The steps for creating a conflict positive school include (a) creating a cooperative context, (b) using academic controversies in classroom instruction, and (c) implementing a conflict resolution / peer mediation program."

- *Responsive Classroom* (RC), created in 1981 and employed nationwide, believes that "there is a set of social skills children need in order to be successful academically and socially: cooperation, assertion, responsibility, empathy, and self-control" (Northeast Foundation for Children, 2006). Schools implementing RC attempt to create safe (violence-free) environments through the fostering of these communities, in the belief that the skills which students learn in order to maintain these communities will follow them out into the communities they join and form as adults.

- ESR (Educators for Social Responsibility), founded in 1982 and based in Massachusetts, developed a nationally-used program "to help students develop social skills, emotional competencies, and qualities of character that increase interpersonal effectiveness and reduce intolerance and aggressive, anti-social behavior" through character education curricula, conflict resolution programming, "consulting, training, follow-up support, coaching, and technical assistance to

help schools implement school redesign initiatives and sustain changes that foster:

a safer, more welcoming and respectful school climate; a fair and seamless system

of discipline and student support; more positive and caring relationships among

students and staff; and a learning culture that expects and supports every student

to be academically successful" (ESR, 2006).

3. *"Academic" programs*: These programs and curricula explicitly examine war,

peacemaking, socialization, anti-racism, gender roles, etc. as content matter. They help

give students a vocabulary for discussing these subjects in the context of the theories

behind them and their historical applications. While a hands-on element may or may not

be present as well, the focus here is explicitly on the theory, ideas, and historical events

(or the construction of historical events) that inform such practices.

Examples:

- *Facing History and Ourselves* began as a set of teacher resources on the

Holocaust but has expanded to cover issues of social justice, racism, violence and

reconciliation in America and all over the world. "Since 1976, Facing History has

been engaging students of diverse backgrounds in an examination of racism,

prejudice, and Anti-Semitism in order to promote the development of a more

humane and informed citizenry. By studying the historical development and

lessons of the Holocaust and other examples of genocide, students make the

essential connection between history and the choices they confront in their own

lives" (Facing History and Ourselves, 2008).

- The PBS *Eyes on the Prize* and *Eyes on the Prize II* series comprise a video

collection and accompanying curriculum materials that detail the tactics and

successes of the American Civil Rights Movement. The series aims to present

"the definitive story of the civil rights era from the point of view of the ordinary

men and women whose extraordinary actions launched a movement that changed

the fabric of American life, and embodied a struggle whose reverberations

continue to be felt today" (PBS, 2008).

- *A Force More Powerful* , a curriculum based on Ackerman and Duvall's

textbook and DVD set of the same name details "a comprehensive history

exploring more than a dozen stories of nonviolent movements in the 20th century"

(Ackerman & Duvall, 2000).

-*Teaching Tolerance* is a series of resources for teacher and students interested in

antiracism, pro-diversity work, "promot[ing] and support[ing] anti-bias activism

in every venue of life" (Southern Poverty Law Center, 2008). They claim to

provide "daily news about groups and individuals working for tolerance and

fighting hate, guidebooks for adult and youth activists, practical resources for

parents and teachers, and entertaining and educational games for young children."

The lines between these three categories, "Encounter," "Conflict Resolution" and

"Academic," may well be more permeable and "blurry" than is indicated here, but they

represent a start to a very important process. With this, or an equivalent typology in

place, one could examine whether certain *types* of peace education programs foster

certain skills more than others, and why. Because of the wildly different contexts and

learning environments in the United States, a typology could be very helpful in

determining what peace education approach might work best in a given location. For

example, a traditional classroom, servicing students with strong basic skills, might be

well suited to an academic program. A classroom in a school or community plagued with structural violence might also choose such a program, but would certainly at least combine it, if not replace it entirely, with a conflict resolution program that helps students develop a hands-on approach to transforming the discord in their own lives. A curriculum or unit focused on service learning could make use of the encounter group model to engage in dialogue with relevant populations.

Perhaps the following hypothetical example might serve to illustrate the differences: Ms. Gonzales has the goal of reducing bullying. In a conflict resolution model, she has her class role-play and dialogue with one another, using lessons to try and build self-esteem, empathy and perspective-taking. She might employ more of an encounter model if the violence she is seeking to staunch seems to be occurring along racial or neighborhood divides; with the support of her principal and community leaders, she could set up meetings, joint sports events, etc. where the two "warring camps" could encounter one another in safe spaces, see one another as human, and build bridges of friendship. If Ms. Gonzales wants her kids to use their knowledge of bullying in their school to help them understand the social environment set up by the Nazis in Europe that permitted and encouraged the dehumanization of the Jews, she would be employing an academic model. Finally, let us not forget that this typology would remind Ms. Gonzales that the work she is doing takes place in a larger national context of commitment to promoting peace and reducing violence.

The creation of such a typology is a worthy goal if we are to take the best advantage of the opportunities for peace education all around us. Such programs are not "optional extras" in a time where state and federal mandates call for basic-skills

education; because they include and promote the very same factors that I have already demonstrated are correlated with high achievement, these programs aid not only peace but basic skills learning as well.

Others have come to similar conclusions: for example, Cohen, *et al.* (2009) cites thirteen studies that support his claim that "to the extent that students feel safe, cared for, appropriately supported and lovingly `pushed' to learn, academic achievement should increase. And in fact, this is what a series of studies from America and abroad has shown" (p 5).

Programs in all of these categories can show evidence of the presence of the P-Factors. Please see 2.5: Typology of Peace Education – Sample Programs Chart and Alignment with P-Factors, for a chart that demonstrates three such programs, how they fit the typology I created and how their own program literature offers evidence of the P-Factors in operation.

It is also important to note that the P-Factors do correlate with increased attainment in a vacuum. The P-Factors would seem to indicate that students' academics improve in some way, shape, or form when these students are safer, see each other and the greater world as cooperative partners, and think critically about their actions. So far this makes a case for those programs in the typology that qualify as Conflict Resolution and possibly Encounter Groups as well. Where, though, is the role for the Academic programs? At present, they seem to be the category in the typology that have the weakest link to the P-Factors. Research yields only a handful of persuasive studies explicitly linking academic peace curricula and achievement.

But the Academic Peace Studies component is not as separable as it may appear.

As mentioned in the last chapter, many of the Conflict Resolution or Encounter Group programs do explicitly include an Academic focus as well. For example, Teaching Students To Be Peacemakers was created by Johnson and Johnson, the same researchers who pioneered the cooperative learning research and articulation discussed earlier. Stevahn's studies about incorporating the Teaching Students to be Peacemakers program into traditional language arts curricula do explicitly make links between conflict resolution skills and academic skills (Stevahn, Johnson, D. W., Johnson, R. T., & Real, 1996; Stevahn, Johnson, D. W., Johnson, R. T., Laginski, & O'Coin, 1996 ; Stevahn, Johnson, D. W., Johnson, R. T., Green, & Laginski, 1997. See also Harder, 1999). Cohen, et al. (2009) argue in their literature review that enough research exists to suggest that:

> we now have research-based school climate-related guidelines that predictably reduce school violence, promote learning and school success in ways that lay the foundation for adults being able to love, work and participate in a democracy. (p 2)

Is this coincidence? Is it worth examining pro-achievement environmental conditions that promote peace and healthy conflict resolution, as opposed to pro-achievement environments that promote some other desirable characteristic, like a propensity towards community service, or skill in athletics?

Part of this question has already been addressed: existing research suggests that students construct knowledge better in environments where they feel physically and emotionally safe, and that cooperation—a key factor in making a peaceable and just society—in and of itself aids learning, according to Vygotsky's theory of the Zone of Proximal Development (Vygotsky, 1962).

But, all analogies about lifelong learning aside, the world is not a classroom. Americans live in fear of violent threats domestically and from abroad, so much so that,

in the name of "security," large percentages are willing to support restrictions on personal freedoms (CBS News, 2006; Pew Center, 2006), would support decreased rights for Muslim-Americans (Associated Press, 2004), have supported two pre-emptive wars on nations (Afghanistan[i] and Iraq) that had never attacked the United States, and at the time of this study's inception, about half support a third pre-emptive war against Iran (Juliano, 2007; Page, 2007). Many political analysts credit the hawkish George W. Bush's 2004 re-election to the "fear vote" (Bumiller, 2004). Given our nation's policy of using violence not only to respond to actual events but also to pre-emptively attack *potential* threats, there would appear to be a disconnect between building peaceable classrooms and graduating students into a world where violence is currency.

Peace Studies argues that such a disconnect is illusory, and that history is replete with successful implementations of large and small scale nonviolent conflict resolution, even in America, to such an extent that it serves as an inspiration to activists worldwide:

> Throughout the world, from South Africa to Northern Ireland, movements of oppressed people continue to use tactics and words borrowed from [American] abolitionist and civil rights movements. The clandestine early meetings of anticommunists in East Germany were marked by singing "We Shall Overcome." Iranians used nonviolent methods borrowed from Thoreau and Martin Luther King, Jr., to overthrow their hated shah…Among the heroes whose ideas inspired the students in Tiananmen Square and whose words spilled from their lips was Abraham Lincoln. Yet we in America, whose antiracist idealists are admired around the globe, seem to have lost these men and women as heroes. (Loewen, 1996, p. 198)

If we labor under a perception that we live in a country and world where violence has been the chief arbiter of human affairs, then the fault would seem not to lie in American history itself, but rather in traditional American education, formal and informal alike, for shaping such a perception in our minds.

Appendix C offers a detailed argument for the necessary pairing of an academic focus on the study of Peace and Nonviolence in theory and in historical practice in order

for the P-Factors to achieve maximum effectiveness in both raising achievement and in

promoting Peaceable school spaces.

2.5 Typology of Peace Education – Sample Programs Chart and Alignment with P-Factors

PROGRAM:	People to People Ambassadors	Teaching Tolerance	Safe Dates
Type	Encounter Group	Academic	Conflict resolution through school structure
Age constituency	K-12	K-12	High School
Quick summary:	Federal program offering 2-3 week summer exchange experiences for K-12 students in various countries. The exchanges include cultural, academic, and entertainment activities.	A curriculum designed by the Southern Poverty Law Center to help students and teachers address issues of discrimination, prejudice, coexistence, etc. Primarily geared towards Language Arts and Social Studies teachers.	9+ session dating violence prevention program for high schoolers.
Evidence of P-Factors' presence: (Taken from program materials)			
A sense of comfort, safety and security, both physical and emotional.	- Preparatory sessions that are "informative" and "interactive," designed to mitigate "culture shock" and fear of the unknown through cultural education about students' destination country. - "Student leaders, area directors and program staff meet with	- Program is devoted to "dismantling bigotry and creating, in hate's stead, communities that value diversity...we view tolerance as a way of thinking and feeling —but most importantly, of acting —that gives us peace in our individuality, respect for those unlike us, the wisdom to discern humane values and the courage to act upon them." - Program contains guidelines and curricula for identifying, stopping and	- Program is "designed to stop or prevent the initiation of emotional, physical, and sexual abuse on dates or between individuals involved in a dating relationship." - "Goals of the program include: (1) changing adolescent dating violence and gender-role norms, (2) improving peer help-giving and dating conflict-

	representatives from Docleaf, an international travel safety and security firm, and the Safe Travel Institute. Attendees discussed ways to ensure safety and to improve safety awareness and education."	preventing bullying, bigotry and one's own "hidden biases."	resolution skills, (3) promoting victim and perpetrator beliefs in the need for help and seeking help through the community resources that provide it, and (4) decreasing dating abuse, victimization and perpetration."
Cooperation and connection within school communities	Encourages the maintenance of ambassador alumni communities upon return to school: "Suite101.com" and other networking sites help students bring the experience back home to their peers.	Focus is always on applying to one's own experiences and communities: promotes in students a sense of themselves as active, responsible members of a community who can make a difference in eliminating racism. For example, the "Mix it up at Lunch" program encourages students to work with their school communities to break down cliques and divisions in their cafeteria.	Activities can reach beyond one classroom: for example, the poster contest and play script can be displayed/ performed for other members of the school community.
Cooperation and connection with communities and ideas beyond the classroom	Most of the program takes place outside of the school, in the foreign setting. Emphasis on cultural immersion, including homestays, meetings with dignitaries, etc.	Materials cover not only school situations but also larger community projects as well: for example, "The ABCs of Identity in the Elections" helps students connect issues of race to the 2008 Presidential race.	Curriculum applies directly to students' own dating lives. In addition, Safe Dates encourages school and community collaboration with local domestic violence crisis centers, such as the National Domestic Violence Hotline. Teachers and implementers are instructed to identify

			and locate community resources in order to provide emergency and non-emergency referrals for those who need it. Parent outreach is included in the program model.
Opportunities for critical thinking, for students to engage in perspective-taking and metacognitive reflection on the process of their learning	Participants "come back with a broader, more enlightened perspective of the world that helps them more truly appreciate the privileges of living in the United States."	Program offers materials and exercises that focus on taking the perspectives of victimized groups, and on examining one's own biases and behaviors.	One of the critical skills taught in the Safe Dates program is the ability to identify abusive behavior and then seek help when abusive behavior occurs (self reflection and critical assessment of others' intentions and behaviors).

2.6 Peace Studies

Just as it makes little sense to teach peace studies in an unsafe school or in a non-democratic, non-reflective classroom, it also doesn't make sense to have peaceable schools and not connect the work done there to questions of how to create these structures on a larger scale, even a national or a worldwide one. The implementation of the right programs could accomplish both, via the presence of the P-Factors and an explicit focus on peace beyond the classroom.

In practice if not in name, most schools operate under a paradigm of "Violence Studies," presenting students with a consistent picture of the world as one governed through the use of autocratic power, where conflicts are addressed through violent means. To create peaceable structures in classrooms for the benefit of achievement may seem to students like a utopian bubble, irrelevant in the face of the world which exists beyond the school walls. Indeed, the third P Factor demands connections outside the classroom to the "real world." How can students take the peaceable skills they learn in classrooms seriously if their vision of the world beyond is one in which those skills are useless?

Unless school curriculum is changed, it will go on teaching students precisely that lesson. Whatever obstacles to such a change may exist, a lack of material to teach about nonviolent means of conflict resolution, or a lack of history of such means' successful implementation to draw upon, should not be counted among them. Appendix C outlines evidence for the "Violence Bias" in curricular content and delivery, and then explores in detail the wealth of evidence, theoretical and historical, to draw upon for helping students see the benefits of creating and maintaining peaceable spaces in the "real world."

3.0 METHODOLOGY AND DESIGN OF THE STUDY

3.1 Introduction

This study was designed to measure the effects of peaceable schools curricula and structures on student achievement. To that end, this study gathered both qualitative and quantitative data on indicators of student achievement, in the form of three established assessments: the students' in-class grades, their MPSP (Massachusetts Public School Performance) standardized test scores, and their MCAS (Massachusetts Comprehensive Assessment System) scores. Equally important, the study also sought evidence of the presence of the P-Factors that I defined. These factors are present in classrooms where students are achieving at higher levels than in classrooms without them (see Chapter 2.0); if these factors are present, then it may be reasonable to conclude, based on the research, that students are learning more and learning at higher rates of mastery, even if the grades and scores do not immediately reflect it.

3.2 Site Selection

I approached the selection of a study site by identifying existing, effective (as defined by existing research) programs through Partnerships Against Violence's PAVnet website (Derzon, J., Wilson, S., & Cunningham, C., 1999; PAVnet Online, 2007) and the US Dept of Health's National Registry of Effective Prevention Programs (US Dept of Health, 2003). I contacted representatives of these programs and asked to be connected with administrative personnel in schools where these programs were being implemented in an attempt to identify and secure an optimum site. An ideal site would have been one in which there were a large number of relatively similar students that could be randomly

assigned to two classrooms, one of which employed peaceable curricula and structures and one of which didn't. Ideally, again, I would have wanted to hold all other variables (especially the teacher) constant so as to set up an experimental test to see if achievement in the peaceable classrooms was higher. Obviously, such an ideal was impossible to achieve given the inability to control variables in this manner in social science.

But site selection proved even more difficult than I had expected, for a variety of reasons. First, several of the organizations that produce these programs seemed unwilling to engage. Phone calls and emails were not returned in a timely fashion, if at all, and requests went unfulfilled. This might be indicative of the understaffed, under-resourced nature of many of these organizations, although in one case a comparatively well-financed, well-known resource center seemed disinclined to arrange a face-to-face meeting between me and any of its directors, despite the offer of the opportunity to have university monitored scholarly research conducted about their program *gratis*.

Among those organizations that did engage, many of the schools employing such programs were either in an inaccessible location (much of this work seems to be taking place in New York, Minnesota, California, and the Southeast, none of which were feasible for this Boston-based researcher) or solely in elementary grades, which would not be appropriate given how much of the theoretical literature that undergirds this study is based on middle and secondary schools.

Finally, the school sites themselves proved unreliable. One site, where staff and administrators initially seemed enthusiastic mysteriously ceased responding to calls and emails and never resumed. Two sites were finally selected. One was a large Boston urban high school where contact was established through a classroom teacher who, of her

own initiative, was employing peaceable classroom structures learned from a professional development course. I was required to apply to both the Lesley Institutional Research Board (IRB) and the Boston Public Schools IRB, passed on both accounts, got permission from the building principal, and invested time and money in training and equipping the teacher with extra peaceable schools information. Consent forms were administered and returned. Observation and data collection began and proceeded for six weeks, whereupon the teacher abruptly cancelled participation, citing reasons related to her personal life and stress level.

These multiple challenges and obstacles may reflect larger difficulties about the teaching world in general, as well as the particular subset that deals with "peaceable schools" types of education. Overwhelmed and under-supported, both institutions and individuals seem limited in their ability to both implement peaceable school structures and in their ability to report the results of their operations.

The site finally used for this study was identified by way of the GRAV (*Get Real About Violence*) program (CHEF, 2005), who put me in contact with the District Attorney of "Sunnydale," an Eastern Massachusetts city who had just awarded a grant to the local middle school to employ the program. With the District Attorney and school principal behind the initiative, this site's situation seemed more stable and sustainable. In addition, the timing was perfect; the principal and superintendent were eager to have data on GRAV's implementation, and thus located teachers whom they knew were interested and willing to go a step beyond GRAV and implement additional peaceable structures in their classes. I believed these additional structures were necessary because GRAV was

not being integrated into a traditionally academic subject,[15] and I was seeking to test the specific interactions of peaceable schools programs with academics.

3.3 Characteristics of the population and setting

The primary population for the study were 37 eighth grade students and two teachers, although for one aspect of the study, the entire population of the school's eighth grade over two years (194 in 2007-2008 and 247 in 2008-2009) were examined.

Sunnydale Middle School is a small urban middle school in Southeastern Massachusetts. As of 2007-08, the most recent year with available statistics, the school enrolled 560 students in grades seven and eight. The student population was 48.6 percent African American, 27.9 percent White, 13.4 percent Asian-American, and 8.8 percent Latino. Nearly half of the students qualified as low income and over a third did not speak English as a first language. Sunnydale Middle School employed a faculty of 39 teachers, 97.5 percent of whom were licensed in their teaching assignment and 94.9 percent of whom met NCLB standards for being highly qualified.[16] This school, with its large proportion of high-need students matched with appropriately prepared teachers, seemed like an excellent place to conduct the study.

Structurally, the school population is split into five teams—two for the seventh

grade, two for the eighth grade, and one split team—each with approximately 105

students. A given team has four core academic teachers, with students assigned

more-or-less randomly to teams. The study focused the majority of its attention on

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[15]   Rather than attempt to assess how "academic" Sunnydale Community Middle School's Health Class may or may not be, I will defer to the fact that Massachusetts standardized tests are given in ELA and in Math, and thus it makes more sense to focus specifically on those classrooms.

[16]   To be highly qualified under NCLB's guidelines, a teacher must hold a bachelor's degree in his or her subject area, be fully certified according to state licensing rules, and have "demonstrated subject-matter competency in the core academic subjects assigned" (ATPE, 2009).

two Math classrooms and two ELA (English Language Arts) classrooms within one team (see Chapter 3.4: Design of the Study) with a smaller segment of the study operating on all the students in every team.

Physical Plant

The physical structure of Sunnydale Middle School is a one story sprawling brick building in a sheltered clearing of trees off a main road. Visitors must be buzzed in at the main entrance, and, as a stranger (even a well-attired one in a suit and tie), I was stopped no less than four times on one day by various adults asking, in a friendly but firm manner, who I was and what business I had here.

Signs hanging in the main office include information about the "McKinney-Vento Homeless Education Assistance Act" and flu virus protection information. The main hall is a wide avenue in which hang many world flags, as well as a closed circuit TV advertising meetings for clubs and the upcoming drama production "Into the Woods, Jr" in the "Cafetorium," with ticket prices set at $2.00 for adults. A large, likely student-made banner proclaims: "We believe we can."

The school building appears to be of recent (last 20 years) construction and is free of obvious signs of decay (no visible peeling paint, no trash in halls, no graffiti on lockers; all water fountains and bathroom sinks operation). A well-tended outdoor courtyard is walled off in the interior of the building, but on the days I observed, the weather was not conducive to gatherings there. Students do not seem to congregate in the halls during class time.

The School Day

The school day begins at 7:30 AM, although many students and teachers arrive during the preceding hour. The first bell is followed by the Principal's PA announcement that it is time to get to class, followed, three minutes later, by his public reading of the school's "morning pledges," which begin with the pledge of allegiance. Following this comes a Sunnydale-specific pledge:

> "As responsible members of the Sunnydale Community Middle School, we pledge to honor the values we hold most important: Respect for ourselves and others, opportunities for all, community commitment, knowledge as power. By building our school upon this rock, we will lay the foundation for our success."

A moment of silence follows, and then the Principal reads various announcements. This is also a time he uses to dispense general advice or commentary on schoolwide issues, such as "The MCAS is tomorrow; get a good night's sleep, eat a good breakfast" or "This is a reminder to get to class on time; many students have many tardies and unfortunately, if you read our school handbook, those tardies add up…it's unfortunate that some of you with decent grades may be sitting here for 5 weeks in summer school this summer because you took your time getting to first period or home room."

At the conclusion of these announcements, he then says, "At this time, teachers you may begin your first period. Thank you."

The school day proceeds for 7 periods. Lunch period is observed in the middle of a split block, with students eating either in the "Cafetorium" or in "lunch clubs" with a particular teacher in his or her classroom. Then classes resume and conclude at 3:20pm.

The Teachers: ELA

Ms. Buffy Somers (all names in this study are pseudonyms), the ELA teacher, is a

32-year old Caucasian woman who grew up on the North Shore of Massachusetts and now lives in a nearby town to Sunnydale. This is her eighth year of teaching, and her fifth at SMS. Her previous teaching experience includes educating incarcerated youth at the Department of Youth Services, which she says she actually found easier than her current job. "Those kids had incentive," she says. "They were halfway between lockup and home and we had a big carrot—you do well here, you get to go home." She describes instruction there as highly individualized, with 16 kids, all on Individualized Education Plans, all of different ages. She reports that in the DYS job, discipline problems were few.

However, here at SMS, she has 116 students and what she describes as "many discipline problems." She originally came to SMS on the recommendation of her sister-in-law, who taught in the district's elementary school. Ms. Somers was asked by her principal to be the participant in this study, but also "thought it would be interesting to see the results." She describes herself as predisposed to peaceable schools education, saying that, "many students grow up without explicitly learning [conflict resolution] skills. I think that adults sometimes take it for granted that kids know how to solve issues without fighting, but that is not always the case. There are many students who have not seen other ways to resolve conflicts."

Ms. Sommers' classroom consists of 24 desks, 20 in a horseshoe arrangement with four desks in the middle. Her desk lies at one end of the room, with a computer in the corner nearby, soft-rock music playing on its speakers between classes and during free periods: "Keep on rocking in the free world," "Heart of gold," etc. Windows on the far wall overlook trees and grass. Behind her desk are a whiteboard and some shelves

full of pictures of Ms. Sommers' family and her pug dogs, telephone, more cardboard tabs of vocabulary words, and more student artwork (including pictures of Yoda, Winnie the Poo, Easter Island heads, etc.). Her desk is nearly bare, fitting with Ms. Sommers' description of herself as "a neat freak—I can't think if there's clutter."

A carpet runs down the center of room, leading to the opposite wall that bears the whiteboard, a dry erase calendar, a marked schedule, and a globe. A podium on wheels is in this area with a pink sign taped to it reading "Good morning and Good afternoon." There is a rocking chair in the corner with several plants, and an overhead projector. Also at the front of the room is a stool with a cardboard box marked "activators."

Moveable Tabs on or near the whiteboard display the date, daily agenda, and objectives for the day, beginning with, "Students Will Be Able To:." Along the sides of the room are steel milk crates with books, each one labeled: "Nonfiction" or "Fiction" (4), and two without labels. Rows of dictionaries lay beneath them. Stuffed animals (mostly bears) are placed strategically throughout the room.

Ms. Somers' room is plastered in all manner of signage, though the overall effect still remains neat and orderly. Her walls are covered in posters and color pictures, samples of student work, lists of vocabulary words, and moveable yellow tags.

Inspirational signs, self-made, read with messages like, "If you don't have time to do it right, you must have time to do it over." Beneath her clock are signs that read "Extra help Tuesdays and Thursdays, 2:35-3:35". Beneath that: "How to answer an [MCAS] ELA open-response question: READ—Read the question carefully, Explain your answer, Add supporting details, Double check your work."

Signs closer to the board read "Absent students: See Ms. Sommers" for work and

"Focus questions: How do writers represent the idea of good and evil? What role does education play in the lives of the characters?"

Two posters are on the classroom door. One reads

"I am here:
To learn, to share, to grow
I am not here:
To disrespect teachers
To make fun of others
To stop others from getting an education"

The second, a sign taped on it, seems to encapsulate the underlying principle behind peaceable schools: "Peace does not mean to be in a place where there is no noise, trouble or hard work—it means to be in the midst of those things and still be calm in your heart."

The Teachers: Math

Mr. Alexander Harris is a 31 year old Caucasian native of Connecticut who has lived on the South Shore of Massachusetts for 9 years. He got into teaching five years ago because he "hated the monotony" of his old job, and felt "teaching is new and different everyday…I wanted the challenge and to help students." He came to SMS as a teacher's assistant five years ago, and two years later became a full teacher of mathematics. He volunteered for the study because of his interest in the concept of how to build a respectful classroom. "If students respect themselves and each other," he says, "they will be more motivated to do better in the classroom, and there will be less distractions."

Mr. Harris' classroom seems more bare and Spartan compared to that of Ms. Sommers. There are 20 desks arranged in three concentric arcs. There are a few inspirational posters on the walls, bearing slogans such as "U Turn – in homework, U get

better grades," "Who you are begins with what you do," "Make an effort, not an excuse," and "Think believe dream dare."

Windows on one side of the room face into the enclosed school courtyard. Shelves beneath them have trays and shelves where students pick up their folders and notebooks at the beginning of each class. There are also trays full of paper tetrahedrons and some messily arranged papers and student clothing lying on the low shelves.

Whiteboards hang both in the front and rear of the room. The day's goals and objectives are on the front whiteboard, and beside it is a calendar of the week's activities for each class that meets in this room.   Beside the whiteboard at the rear is a special "grid" whiteboard that is used for exercises involving graphing. Also in the rear of the room is an alcove with Mr. Harris' desk, covered in notebooks and papers. There is also a row of computers here, a TV parked in the corner, and a draped American flag. Above his desk is a bulletin board with a placard titled "My life in percents," below which lie tacked-up examples of student work in no clear arranged pattern. The hum of a heating or air-conditioning unit permeates the room.

Mr. Harris has a student teacher, Ms. Willow Rosenberg, and a SPED aide as well.

The Students

Comparison Group

The comparison class consists of 16 students with the following demographics: 6 boys, 10 girls, two Whites, 12 African Americans, two Latinos. Ms. Sommers describes this as a "pretty typical class" at SMS. Mr. Harris describes them as "a diverse group with a number of students on IEPs….of mixed ability and motivation."

<u>Treatment Group</u>

The treatment class consists of 20 students with the following demographics: 14 boys, 6 girls, four whites, 15 African Americans, one Latino. Ms. Sommers describes this as having, by chance and not by design, a larger percentage of males than usual. Otherwise she describes it as typical.

It is important to note that both groups of students were consciously selected because, contrary to initial descriptions of their "typicality," I learned much later that all of these students were chosen because of status as weaker performers when compared with the rest of the school population, and furthermore, that the treatment group in particular was composed of the students deemed to be weakest of all. My design had called for as randomized a study as possible, but that wound up not being what happened.

3.4 Design of the Study

The study consisted of two components, an **historical aspect** and a **comparative aspect**.

The majority of the focus of the study is on the comparative aspect. For this aspect, data was collected from a representative sample of eighth grade Math and ELA classes within one team at the school. The Math and ELA classes were selected because the district administers exams six time per year in these subject areas, the teachers of these classes were willing to volunteer, and the district was especially interested in raising the scores on MPSP standardized exams in these areas, because these are the areas that both state and federal agencies were using as gatekeepers.

The treatment group consisted of 19 students, who were observed in one ELA class section and in one Math class section. They received specific peace education curricula (lessons from *Teaching Students to be Peacemakers* and *Conflict Resolution in the Middle School*, both described below), as compared with 18 students in one ELA class section and one Math class section who are not receiving this treatment. (For more, see Chapter 3.5: Details of the Treatments.) However, both these treatment groups and the comparison groups were, in piecemeal fashion, receiving the GRAV treatment. (See below, re: the historical aspect.) See the end of Chapter 3.3: Characteristics of the Population, for an explanation of the initial differences in academic achievement between the two groups.

Table 3.4-A: Comparative aspect study design

```
        2 ELA Classes                              2 Math Classes
       /          \                               /          \
 TSBP Treatment  Comparison              TSBP Treatment   Comparison
    Class          Class                    Class            Class
```
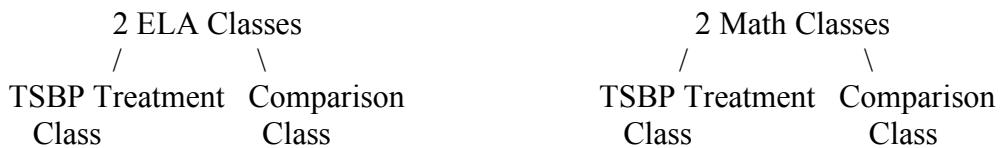
The same teacher taught two sections of the same class, one with additional peace education measures and one without.

There was also an historical aspect of the study, in that all students at the school were receiving a quarter-long (9-week) curriculum called *Get Real About Violence* (GRAV) in their health class, a class that also included sexual health education and other "healthy lifestyle" instruction. Students were assigned by the school randomly to this health class, without any correlation with who was in the treatment or comparison groups in the comparative study, and were "cycled" through in roughly equal groups of about 150, one group per quarter, until all students took part. Periods lasted about an hour

every day.

Regarding the population size (n) of this segment of the study:

In 2007-2008, while the total number of students with MPSP data (see Chapter 3.6 – Variables Studied) was 283, a total of 92 of those students were missing one or more test scores. For any given comparison, I only examined students who had taken all five tests. In the case of the final averages, the n for this cohort was 191.

In 2008-2009, while the total number of students with MPSP data was 246, a total of 75 of those students were missing one or more test scores. For any given comparison, I only examined students who had taken all five tests. In the case of the final averages, the n for this cohort was 171.

Unfortunately, a comparison study between treatment classes and those not receiving the GRAV treatment was not possible since the students in the Math and ELA classes were not kept together in their health classes. Thus, every ELA and Math class had some of their students receiving the treatment each quarter, a number that increased until all students finished it by the end of the year.

Table 3.4-B: Historical aspect study design: Schedule of GRAV treatment

implementation, with observation schedule

Month	September	October	December	January	March	Late May
Number of observations	1	1	2	1	1	2
Status of Treatment	No students have received appreciable amount of treatment yet – establishes a baseline.	¼ of students have experienced the treatment		½ of the students have experienced the treatment	¾ of the students have experienced the treatment	All of the students have experienced the treatment

3.5 Details of the Treatment(s)

A. Treatment for Comparative Aspect: Teaching Students to Be Peacemakers and

Conflict Resolution in the Middle School

I gave two books to each of the teachers, *Teaching Students to be Peacemakers* (Johnson & Johnson, 2005) and *Conflict Resolution in the Middle School* (Kreidler, 1997). Both texts offer research-backed lessons, within a theoretical framework, that would qualify as Conflict Resolution programs on my Peace Education Typology. Both programs, combined, would seem to address all four of the P-Factors, as explained shortly.

Teaching Students to be Peacemakers (TSBP) is

a program that teaches conflict resolution procedures and skills to all students, faculty, and staff members. It is based on the premises that conflicts cannot be suppressed or denied, and conflicts may have positive or negative consequences,

depending on how they are managed. Students learn how to engage in problem-solving negotiations and how to mediate schoolmates' conflicts. Delivered through twenty 30-minute lessons, the program serves as a vital component in an overall strategy to reduce violence in schools. (US Dept of Health, 2003)

TSBP was designated as a "model program" under The US Department of Health and Human Services' National Registry of Effective Prevention Programs.

Teaching Students to be Peacemakers is rooted in Cooperative Learning Theory designed by Roger Johnson and David Johnson at the University of Minnesota, which addresses P-Factor #2: Cooperation and Connection within School Communities. According to Johnson and Johnson (1994), Cooperative Learning involves more than just students being together in a group. There must be what they call "positive interdependence," which is

> when students perceive that they are linked with group mates in such a way that they cannot succeed unless their group mates do (and vice versa) and/or that they must coordinate their efforts with the efforts of their group mates to complete a task…[t]here is a difference between simply having students work in a group and structuring groups of students to work cooperatively. A group of students sitting at the same table doing their own work, but free to talk with each other as they work, is not structured to be a cooperative group, as there is no positive interdependence .

Johnson and Johnson go on to specify that positive interdependence needs to be coupled with individual accountability for each student's role in the group effort, as well group accountability for goals:

> Each group member's efforts are required and indispensable for group success (i.e., there can be no "free-riders"). Each group member has a unique contribution to make to the joint effort because of his or her resources and/or role and task responsibilities.

To this end, Johnson and Johnson also list as prerequisites for true cooperative learning the development and usage of interpersonal and small-group skills for communication,

coordination and conflict resolution within groups. The materials in their manual are designed to facilitate such activities, including lessons that explicitly address students' out-of-school lives (P-Factor#3: Connection with Communities and Ideas beyond the Classroom).

The exercises and lessons from *Conflict Resolution in the Middle School* were created by William Kreidler, author of four other violence-prevention curriculum books and recipient of the National Conference on Peacemaking and Conflict Resolution's 1997 Hermann Award for Distinguished Contribution to the Field of Conflict Resolution. The book is published and promoted by Educators for Social Responsibility (ESR), an organization whose self-described mission is to "…stimulate critical thinking about controversial issues, teach creative and productive ways of dealing with differences, promote cooperative problem solving and foster informed decision-making" (Kreidler, 1997, p. 387). Like TSBP, this mission addresses P-Factor#2, but also P-Factor#4, Perspective-Taking and Metacognition, and P-Factor#1: Comfort and Safety. Like TSBP, some of Kriedler's lessons also address the larger world, and thus address P-Factor#3. (For a list of articles and studies that support the efficacy of the book's lessons and exercises, please see Kreidler, 1997, p. 383-4.)

More recently, a 2004 study of Project WIN, a Conflict Resolution program that drew heavily from Kreidler's book (as well as two other books), examined the program's impact on fifth graders in an economically disadvantaged Pennsylvania school district. Their study of the effects of WIN on a treatment class vs. a comparison (n=34) class over four months yielded significant differences in the two, as measured by questionnaires and qualitative observations designed to look for evidence of pro-social tendencies,

cooperation and teamwork skills, etc. The treatment group showed gains, and the comparison group showed declines; 13-24 percent of this difference (depending on the item being measured) was attributed to the effects of the program (Roberts, *et al*., 2004, p.474-8). The authors conclude, "with regard to cooperative attitudes toward classmates…Project WIN is effective at increasing students' liking each other and working together as a team...students in the treatment group are more aware of the importance of anger control during conflict and are more likely to consider conflict resolution to be a problem-solving process (p. 479). While this study did not explicitly examine links to achievement, given the research on the P-Factors, it is reasonable to hypothesize that these effects will indeed improve student learning.

Training and Specific Lessons Employed

It was the intention of the program designers to have teachers employ all or most of the exercises and lessons within these books, within a greater context and framework of cooperative conflict resolution, a whole "paradigm shift" for which the lengthy training sessions were designed to prepare teachers to create the kind of atmosphere that would promote and support the P-Factors. TSBP in particular calls for 30 hours of training to be conducted by employees of the program.

However, the multi-thousand dollar cost of this was beyond my (or Sunnydale's) ability to fund. Instead, I gave one-day training to the teachers and supplied them both with copies of the manual and some supplementary materials, as this was all that their (and my) schedules would permit. In addition, I offered my support via phone and email during the school year, but the teachers did not take me up on this offer.

What happened in practice, and not according to my own designs (although not entirely to my surprise, either), was that the teachers picked and chose what lessons and structures from within these books they would use, and how they would adapt them to their own class goals. While far from ideal, this arrangement was deemed necessary in order to ensure any participation at all from the teachers, and I decided that even a piecemeal, partial use of the treatment was better than none at all.

The ELA teacher, Ms. Sommers, describes how she used the following lessons/structures with the treatment class, and not the comparison class:

Class activity/structure: We read the book *Have You Filled a Bucket Today: A Guide to Daily Happiness for Kids* and discussed ways to create vs. destroy happiness/self-esteem in others. From this book we took to using the terms: "bucket filler" and "bucket dipper" (one who gives complements and fills others 'buckets' vs. one who takes from others' buckets). The students used these terms when they saw that someone is being put down or teased. They stood up for each other and told each other not to be a "bucket dipper." We found that this was a nicer way of letting someone know that their behavior was hurting someone else without using words like "jerk" or "bully."

Class Structure: Periodically the students would "fill a bucket," meaning that they would give a compliment to someone in the class (via slip of paper placed in the bucket). This could be anonymous or not, whichever they chose. The bucket, once filled, would then be read aloud so that the students could hear the compliments. Other versions that we did were to write something that someone in the class did that was a good deed.

Class structure: I do very informal [verbal] check-ins with the students as they are working on their activators. I use this as a way to gauge the 'temperature' of the class (as

I have them at all points in the day, there are days where something has occurred that has affected their mood or the mood of the class that I may not be privy to).

Class activity: Used the "How I Act in Conflict" checklist (Lesson 12 from *Teaching Students to be Peacemakers*) to determine their own conflict styles and then determine which styles were more likely to have positive or negative results. We used this throughout the readings (short stories and *The Pearl*) to discuss the characters' styles of solving conflicts.

Class activity: We discussed conflict types (internal/external) early on in the year with short stories. We determined how they arose in the stories and ways the characters could have avoided them. Within the stories we talked about how the conflicts were handled and whether the results were positive or negative.

Class activity: During our study of Anne Frank and the Holocaust, we discussed this and other conflicts between groups of people in history. We looked at the responses to these conflicts (some examples: Civil Rights Movement, Holocaust) and the outcomes.

Class activity: While reading the play version of *The Diary of Anne Frank*, we spent time looking at the different ways the characters responded to conflict (i.e. avoiding, bullying, compromising, aggression, appeal to authority etc.) (Adapted from a lesson from *Conflict Resolution in the Middle School.*) We discussed whose tactics worked and whose did not have positive outcomes.

Class activity: While reading *The Pearl*, we discussed different kinds of conflict resolution like win-win vs. win-lose, and how the win-lose results could have been

different.

The Math teacher, Mr. Harris, describes how he used the following lessons/structures with the treatment class and not with the comparison class:

Class structure: [I] checked in with the students during the first few minutes of class, sometimes individually, sometimes the class as a whole. This enabled us to get a feeling for how the day was going and adapt our lesson accordingly. If the class was frustrated, we stopped for a few minutes of fun to pick them back up.

Class structure: The class set goals every term. These goals would be revisited relatively often and students would reflect on what they were doing in class that was either working toward or hindering their goals.

 Class structure: Different students led the class lessons at different times. This allowed students to see how disruptive some of the interruptions could be at times. Once they were back to being a member of the class, they were able to effectively change their behaviors.

Class activity: [I used] role-playing activities adapted from *Teaching Students to be Peacemakers*. Rather than play out "made-up" situations, when a conflict arose in class, we would often take a couple of minutes to talk it out and figure out what other approaches could be used. Very often, this ended with both sides apologizing and many students being aware that many arguments are simply miscommunications that can easily be talked out.

 Class activity: When working with probability and discussing experimental probability (what actually happens) and what can change the probable outcome of events, the class

applied this concept to conflict areas in their lives. After discussing positive and negative outcomes, they made lists of what could be done during a conflict to tilt the scales more towards a positive outcome (adapted from 4:29 in *Teaching Students to be Peacemakers*).

Class activity: Making a Profit activity from *Teaching Students to be Peacemakers*. Looked at the success of a buyer and seller who were willing to compromise vs. ones who were not.

B. Treatment for Historical Aspect: Get Real About Violence (GRAV)

GRAV (*Get Real About Violence*) was developed by the Comprehensive Health Education Foundation, who also produced the drug education curriculum *Here's Looking At You*, the AIDS prevention curriculum *Get Real about AIDS*, the tobacco education curriculum *Get Real about Tobacco*, and the peer-helping program *Natural Helpers* (CHEF, 2005). According to my typology of peace education, GRAV would be considered as a Conflict Resolution program due its emphasis on the prevention of violent conflict between students, as described in the US Dept of Health's National Registry of Effective Programs and Practices:

> *Get Real About Violence* (GRAV) is a K-12, research-based prevention program that addresses a wide range of violent behavior in students—from bullying and verbal aggression at early grades through fighting and social exclusion at middle grades to relationship abuse and assaults that can occur in later grades. GRAV places emphasis on enlisting the support of bystanders, changing violent norms, teaching social skills, and building communication and partnerships between adults and youth to stop violence. The GRAV multimedia curriculum consists of three separate modules: (1) vulnerability to violence, (2) contributors to violence, and (3) alternatives to violence. GRAV provides a blueprint for conducting a needs assessment. It clearly defines goals and objectives and contains pre- and post-tests in all grade levels for evaluations to measure the extent students have achieved objectives. (US Dept of Health, 2003)

GRAV operates based on the Theory of Reasoned Action or TRA (Whitehouse.gov, 2008) developed by Martin Fishbein (1975) and Icek Ajzen (1975, 1980, 1985, 1991). TRA posits that a person engages in behaviors based on that "person's perception that most people who are important to him…think he should or should not perform the behavior in question" (King, et al., 2009). In other words, behavior modification programs based in TRA focus on changing social norms in a community climate to discourage certain behaviors; if you believe that "everyone else" thinks a certain action is unacceptable, the theory goes, then you yourself will be less inclined to do it. In the case of GRAV, the curriculum uses

> instructional tools, activities, and scenarios designed to decrease students' positive attitudes toward violence and to increase negative attitudes toward violent behavior, while also establishing antiviolent norms in response to verbal, physical, or emotional cues (Whitehouse.gov, 2008).

The GRAV curriculum consists of 12 lessons divided into three modules:

- *Vulnerability to Violence*—including a) "No Big Deal," b) "Shooting in Three Parts," and c) "A Commitment to Nonviolence"

- *Contributors to Violence* —including a) "Influences All Around," b) "Violence Is Encouraged by People Like Us," and c) "Guidelines for Nonviolence"

- *Alternatives to Violence* —including a) "Nonviolent Acts," b) "It's About Us Too," c) "The Refusal Skill," d) "The Refusal Skill for Self-Control," e) "The Conflict Resolution Skill," and f) "Transfer"

Most lessons are designed to be taught during a single class period, with some taking two periods instead.

GRAV offers separate curricula for different stages of K-12 education; the school

in this study used the materials designed for grades 6-9, whose goals (CHEF, 2005) are:

* to encourage students to change the norms that promote and perpetuate violence

* to address factors that put students at risk for becoming involved with violence.

* to make the overall school environment safer and more supportive.

GRAV's lessons, in detail, include:

"Vulnerability to Violence," which helps students understand that violence is their problem, that mean and violent incidents do occur at their school and community, and that violence hurts them and others.
"Contributors to Violence," which helps students become aware that they're influenced to commit and tolerate mean and violent acts, identify the sources of influence, critically analyze mean and violent messages when they get them, and learn to resist them.
"Alternatives to Violence," which helps students learn and practice strategies and skills to avoid violence.
Each lesson is designed to reduce risks associated with adolescent problem behaviors. Each lesson is designed to promote at least one of the following norms:

Adults should help. [And therefore, I should seek adult help when troubled.]
I can be a powerful force to reduce violence.
I can solve problems nonviolently.
It's good to ask an adult for help.
It's good to discourage violence.
It's good to help people in trouble.
No one deserves to be a victim.
People who are nonviolent are cool.
School should be a safe and supportive place.
Violence is everyone's problem.
Violence should not be accepted or tolerated

Packaged with the GRAV curriculum is a teacher's guide called *Preventing Violence:*

Changing Norms in a School, which summarizes the research upon which the curriculum

is based and details the operations of the GRAV program in other school settings. The

document also contains additional lessons and materials designed to "extend the lessons

into the student's life outside the classroom," which matches P-Factor#3.

GRAV would seem to align with the other P-Factors as well: P-Factor#1, creating

a safe environment (as its stated goals), P-Factor#2, developing cooperative skills (in the "Alternatives to Violence" section), and P-Factor#4, encouraging critical thinking, including perspective-taking and self-awareness (in the "Contributors to Violence" section).

In June 2003, GRAV was designated as a "Promising Program" under US Dept of Health's National Registry of Effective Prevention Programs (NREPP). In this evaluation,

> Experimental students demonstrated less verbal aggression than the control students and were less likely to be verbally aggressive in the future. Experimental students were less likely to spread rumors about a fight in the future. Experimental students were less likely to watch a fight in the future. Experimental students had more pro-social attitudes toward verbal aggressiveness and opinions relative to violence. (US Dept of Health, 2003)

Two of these studies are detailed here: one was an evaluation of GRAV's implementation with 7th grade students, which

> used a pretest-posttest nonequivalent comparison group design. Two moderately sized, public junior high schools in a Midwestern city were chosen as test sites, one as a treatment school (n=168) and the other as a control school (n=125). The participants for the treatment and control schools were demographically similar. All students were ages 12 to 14. Most of the participants from both schools were African-American, and roughly 50 percent of the participants were female. Seventh graders were tested before program implementation and then 6 weeks and 3 months after implementation. Participants were given a confidential questionnaire to assess four primary behaviors: watching a fight, telling friends about a fight that is going to happen, verbal aggression, and fighting….

> The evaluation for the seventh graders suggests that from pretest to the initial posttest, the experimental group improved on a greater number of items and digressed on fewer items than the control group during each time period. The experimental group was significantly less likely than the control group to act verbally aggressive toward another person and was more likely to think that being verbally aggressive would cause someone else harm. Experimental group participants indicated they were less likely to watch a fight or spread rumors about a fight that was going to happen, were more likely to believe that getting into a fight would hurt their own family, and that if someone tried to start a fight with them they would try to avoid it. (Whitehouse.gov, 2008)

The second study focused on 9th-12th graders, which

used a posttest-only nonequivalent comparison group design. The participants all attended the same rural Midwestern high school. The two groups differed in size and composition. The treatment group had 198 participants and the control group had 160 participants. Data was collected using the School Safety Survey. The dependant variables included witnessing relational aggression, witnessing physical aggression, perceptions of adult norms, perceptions of peer norms, behavioral intent as a bystander, and behavioral intent as a victim….

The evaluation of the high school curriculum showed that the two groups did not differ in the amount of relational or physical aggression witnessed. This suggests that both groups experienced similar school environments. The treatment group was significantly more likely to view adults as reacting positively if a student was to report an aggressive act. The control group was more likely to perceive adults as making it worse for the student. There were no significant differences between the two groups on the scales measuring peer norms…Students in the treatment group were more likely to choose prosocial responses as a witness to or victim of violence; they were more likely to try to help a victim of a fight, less likely to join in a fight, and less likely to retaliate to aggression with aggression. (Whitehouse.gov, 2008)

Specific to GRAV's implementation at the study school, a trainer from the Massachusetts Aggression Reduction Center at Bridgewater State College conducted an unspecified amount of training for all teachers in anti-bullying/anti-harassment protocols. The school also worked with the city Attorney General's office on a Safe Schools Initiative to better implement the program.

Students received the bulk of the GRAV program via the aforementioned new health class, the first new class at the school in seven years. The class met every other day, with the school schedule altered in such a way that no time was taken from content areas. Each "team" (small learning community) in the school received one quarter (9 weeks) of this health class, on a rotating basis (1 team during quarter 1, one team during quarter 2, etc) during one of the four quarters the year.

As mentioned earlier (see 3.2), I wanted to study peaceable schools curricula

when integrated with traditional academics, which is why GRAV in itself was not a sufficient treatment for me to examine. However, the NREPP report concludes that "other GRAV strategies found to be effective include involving families and communities with extension activities" and "presenting a variety of lessons to address different learning styles of students," so choosing to also engage in the Comparative Study and examine students who were receiving additional peace education treatment seemed appropriate.

All teachers at Sunnydale High experienced an orientation in GRAV, but only the health teachers were responsible for its implementation. Unlike the case with the comparative aspect of the study, here the teachers did all undergo the fully realized training.

3.6 Variables studied

The null hypothesis was that the classrooms and students receiving the treatment (particularly in the comparison study, but also those who access GRAV before their fellows) will have no significant changes in the measures of achievement: grades, MCAS, MPSP scores, and the presence of P-Factors. Data was collected and examined to test my hypothesis: that the treatment class would show increases in these areas relative to the amount of treatment they are receiving.

For the comparative aspect of the study, the *independent variables* examined were the following:

* Placement in treatment class vs. non-treatment class
* What time of year (what quarter) and thus the level of student experience with the the GRAV program

* Gender[17]
* Race[18]

The *dependent variables* that were tested for the influence of the independent variables

were the following (all of which will be explained shortly):

* In-class grades in Math class
* In-class grades in ELA class
* MPSP standardized test scores in Math
* MPSP standardized test scores in English
* MCAS scores in Math
* MCAS scores in English
* Responses to the P-Factor SCC Survey
* Observed behavior as measured by the P-Factor SCC Scale
* Observed behavior as measured by the Florida Taxonomy of Cognitive Behaviors
* Responses to interviews seeking connections between treatment and possible consequent results

A representative sample of students was assessed multiple times during the year (see

Table 3.6-C for schedule) to gather data on these variables.

For the historical aspect of the study, the *independent variables* examined were

the following:

* Year the student was an 8th grader (this was the only way to test for GRAV's influence, as GRAV was a program present in the 2008-09 year but not in the 2009-10 year)
* The student's teacher in their ELA or Math class

The *dependent variables* which were tested for the influence of the independent

variables were the following:

* A student's average from the year's 5 MPSP ELA exams
* A student's average from the year's 5 MPSP Math exams

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[17]   Gender wound up having no significant correlations with any of the data, quantitative or qualitative, and thus is not discussed in Chapter 4.0.

[18]   Race wound up having no significant correlations with any of the data, quantitative or qualitative, and thus is not discussed in Chapter 4.0.

Table 3.6-C: Schedule and execution of data collection

Data Collection Method	Observations (whole class)	Interviews & questionnaires with rep sample of students	MPSP standardized test scores (whole class)	In-class grades (whole class)	MCAS Scores
Number of times executed over the course of the year	8	3	5	4	1
Population Studied	4 entire classrooms of students	A representative sample from each class	All students in all four classes	All students in all four classes	All students in all four classes
Schedule of execution	More-or-less monthly (See Table 3-B)	Once in September, once in December, once in June	Collected at the end of the year	Collected at the end of the year	March
Method of execution	Observer in the classroom	Observer conducts interview at the least-disruptive time for teachers (perhaps after school)	Data provided by school	Data provided by school	Data provided by school

As is evident from this large number of dependent variables, I was seeking a multiplicity of student data sources for possible triangulation in order to try and compensate for the failings of any one type of data.

Grades, for example, can be idiosyncratic to certain teachers and classrooms,

limiting generalizability if they are the only measure of student achievement studied.

Standardized test scores do not suffer from that problem. The Massachusetts Comprehensive Assessment System (MCAS), created in response to the state's 1993 Education Reform Act, became in 2002 the official NCLB-required test that governs the advancement and graduation of Massachusetts public school students.

The MPSP (Massachusetts Public School Performance) tests were created by a private organization that currently works with 12 schools, mainly charter schools. According to their literature (MPSP, 2008) these tests "are designed to model the degree of difficulty of the Massachusetts Comprehensive Assessment System (MCAS) assessments" and **"have been aligned to the scope and sequences of participating schools. They measure skills that actually have been taught at that point in time in the classroom—not merely knowledge the student should have at the end of the year…the same assessments are used across the MPSP Network to allow for comparable data."

The MCAS were administered only once per year, but the MPSP tests were administered five times during the school year, with school curricula aligned so as to lead up to the test when it is administered. It is important to note that the tests were not precisely cumulative; teachers reported some carryover from test to test in ELA, and the testing of largely separate skills in math. Because of this structure, judging student gains from one test to another was problematic.

On a larger level, a limitation of this data source is that any standardized tests are, due to their nature, less permeable to changes in the short-term. Any new intervention seemed unlikely to produce a sizable effect on standardized test scores in such a short time period (Jablon, 2007).

The *instruments* designed to measure the P-Factors (see Appendix A) are geared to track the precursors and correlates of student achievement, such that if we see "X" behaviors happening, I can say with some confidence, based on existing literature (see Chapter 2), that students are likely to be learning and achieving at higher levels.

Because my thesis rests so heavily upon Social Constructivist Theory (see Chapter 2.2), it was necessary to also assess the level of constructivism in the classrooms. For thus purpose, I used an instrument called the Reformed Teaching Observation Protocol (RTOP), described towards the end of the following chapter.

3.7 Details of instruments for data collection

Of the four instruments employed, three were observational instruments and one was a student questionnaire. Two were designed to look at environmental P-Factors (classroom safety, cooperation, and connections beyond the classroom) and one was designed to assess the presence of critical thinking, which is one P-Factor that is in some ways enabled by the other three. In addition to these instruments (described below), interviews with students and teachers were conducted as an additional means of collecting qualitative data, and a fourth instrument, the RTOP, as mentioned earlier, was used to assess the level of constructivist teaching and learning in all four classrooms, since safe social interaction is a more vital factor in constructivist classrooms where students are creating and negotiating understandings.

Instrument#1: The P- Factor Observable SCC (Safety, Cooperation and Connection) Scale is designed to assess classroom climate (See Appendix A for a complete copy of

the instrument). According to 2.0: Review of the Literature, and enumerated in my construction of the P-factors, students learn best in climates that promote safety, cooperation, connections beyond the classroom and critical thought. This is, according to the Vygostkian line of reasoning, because knowledge is socially constructed and depends upon interactions with environmental factors. Since no single instrument could be located that measured all four of these factors explicitly, I built this one from elements of the Out of School Time Observation instrument (OST), the Cooperative Learning Observation Protocol (CLOP), and several questions of my own design.

The OST, or Out of School Time Observation Instrument, Second Edition, (Policy Studies Associates, Inc., 2005), "provides site visitors at the out of school time program sites with a framework to capture and rate essential and observable indicators of positive youth development" (p.1).

The OST is rooted in the theory that

positive outcomes occur when adults deliberately create opportunities where activity content and instructional processes are both knowledge- and youth centered and when adults use both structured and unstructured teaching strategies to promote learning and mastery (Bransford, *et al*, 1999; Durlak & Weissberg, 2007; Grossman, Campbell, & Raley, 2007). To reflect these principles, the OST Observation Instrument measures activity content and structure, the quality of interpersonal relationships, and the degree to which activities focus on skill development and mastery, all factors that encourage positive youth outcomes.

The instrument captures data on three major structural components…(1) the types of activities that engage youth; (2) the structures that facilitate activities (e.g., spaces used, staffing, number of participants and their grade levels, adequacy of adult supervision, and materials); and (3) the quality of interactions among participating youth and the adults who work with them. For each activity, observers first record information about the number and grade levels of participants, the type and number of staff, and the activities and primary skills targeted. They then rate the quality of interactions among youth and between youth and adults in five domains: youth relationship-building; youth participation; relationship building among staff and youth; instructional strategies; and activity content and structure. (Pechmen, et al., 2008)

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For detailed validity and reliability studies, see Pechmen, et al., 2008.

Although the instrument is designed as a comprehensive evaluation tool for *after-school* programs, the section I used (p. 6-7) contains a rating scale for student and teacher/adult facilitator behaviors in a classroom setting, which seem entirely applicable to a during-the-school day class as well.

Sections were also added from the CLOP, or Cooperative Learning Observation Protocol (Kern, *et al.*, 2007)**,** an observation instrument that was developed and piloted at the University of Minnesota, based on CEPT-Core Evaluation Classroom Observation Protocol, a widely used instrument to record and evaluate teacher's instructional activity (Lawrenz, et al., 2002). The CLOP is a criterion-referenced instrument used to describe and evaluate student interactions during group activities in the classroom" (Kern, et al., 2007, p.3), specifically via the PIGS-Face model outlined by Johnson and Johnson (1988): "positive interdependence, individual accountability, group processing, social skills, and promotive interaction" in the following manner:

> The protocol has several parts. In the first part prompts and space are provided to capture a description of the general demographics of the classroom and class including items such as type of course, number of students, and description of the physical environment of the classroom. The second part prompts and space are provided to include details of the context of instruction leading up to the task. The third part, the evaluative section, provides space and prompts to record the activity of the group, the major interactions, and rate the interactions occurring in each five-minute interval of the observed cooperative learning activity. The observed interactions are coded according to level of group involvement in the five elements of cooperative learning (interdependence, individual accountability, group processing, social skills, and promotive interaction)…Coding the elements of cooperative learning provides an evaluative rating (high, medium, low) of the student's achievement and attention to the skills of cooperative learning in the cooperative learning activity. (Kern, et. al., 2007, p. 3-4)

The CLOP's designers tested for reliability and validity in the following manner:

…two researchers simultaneously observed four separate cooperative learning groups and used CLOP to rate the cooperative teams. The absolute percent agreement for the four ratings was 75% and 95% of ratings fell within one point difference. The calculated Cohen's Kappa [17-18] for the inter-rater reliability agreement was $\kappa = 0.67$. According to Landis and Koch [19], this is "substantial agreement," which is only second to "almost perfect agreement." (Kern, et. al., 2007, p. 6)

The questions I added were designed to track the number of verbally or physically threatening behaviors students expressed in class.

The entire combined instrument retains validity and reliability from its component parts. Its combined use was calibrated for inter-observer reliability on a classroom of college undergraduates. By the end, the differences between each rater's assessment of a given item on the Likert scale was within 1 point of each other (e.g., something one rater would give a score of 5 to would be in the 4-6 range for another rater as well). During the course of the study my observer and I continued to check in to try and insure that our ratings remained in synch during the data collection phase.

Since the P- Factor Observable SCC Scale was an observation tool employed by an outsider visiting classrooms once a month to "dipstick," as it were, I deemed it useful to supplement this data with student self reports in the forms of interviews and questionnaires.

Instrument#2: The P-Factor SCC Survey is a student questionnaire which I designed to address student perceptions of classroom and school safety, as well as the degree of cooperation present. This instrument was built using questions from the CSCSS-SF (California School Climate and Safety Survey), the CATS (Child Adolescent Teasing Scale), the CLI (Classroom Life Instrument), and several questions of my own

design for classroom student safety and comfort factors not addressed by the other instruments.

The CSCSS, or California School Climate and Safety Survey (Furlong, et al., 2005), was

> designed specifically for use by school site safety planning teams. It is a student self-report questionnaire created to measure general school campus climate and personal safety-related experiences…it is a three-part survey designed to assess students' perceptions of school danger and the supportive climate of their schools. The final section, the School Victimization Scale, consists of items that ask students to indicate whether they have personally experienced different victimization events at school during the past month such as bullying, personal injury, theft, and verbal harassment. The instrument also includes a social desirability scale, response reliability items, and general demographic items.

For validity and reliability data, please see Furlong, et al, 2005 ("Development").

The Child-Adolescent Teasing Scale (CATS) (Vessey, 2003) developed at Boston College, is designed to identify levels of teasing and bullying in middle school students. Combined with school data on the number of incidents of fights or violence, this instrument would help assess the level of physical and emotional safety in the school climate, which has been correlated in the literature with achievement. The CATS was tested for validity and reliability in the following study (Vessey, et al., 2008):

> Principal components analysis resulted in a 32-item, 4-factor solution: Personality & Behavior Teasing (14 items), Family & Environment Teasing (7 items), School-Related Teasing (9 items), and Teasing About My Body (2 items). The standardized Cronbach's alpha for the final version was .94 and ranged from .83 to .90 for the subscales. The CATS's content validity, initially ascertained a priori by experts, was re-reviewed upon the instrument's refinement and supported. One-tailed t tests of mean differences between low- and high-scoring CATS groups on the PSC ($t = -3.41$, $p < .03$) and the PHCSCS ($t = -11.39$, $p < .001$) and supported the CATS's criterion-related validity. Conclusions: The 4-factor, 32-item CATS is psychometrically defensible and has demonstrated potential as a screening measure to identify students who are at risk from distressing teasing (Abstract).

The CLI (Classroom Life Instrument) **(**Johnson, et al., 1985) is a survey

for students that seeks to measure the same factors measured by the CLOP. The

Classroom Life Instrument has 59 Likert-type questions, to which respondents

indicate on a 5-point scale their level of agreement with these statements. See

Johnson et al., 1985 (p. 406-408) for reliability and validity data for this

instrument.

I added two questions of my own design about perceptions of student safety in

being able to propose new ideas in class without being teased or marked for

victimization. The combined instrument retains validity and reliability from its

component parts, and was further tested for Test-Retest reliability on a population of 13

tenth-grade students at a suburban high school. Conversations with the students

afterwards indicated that the answers they thought they were giving corresponded with

my interpretation of those answers, although with a population this small, significance

testing was not reliable.

Questionnaire and Interview Protocol

Teachers selected students (depending on the day in question) to leave class, to

stay during a free period or to stay after school in order to participate. Before

administering the questionnaire and interviews, the observer solicited from the teachers

(without student knowledge) information about which students were from the treatment

class and which students are from the comparison class. He then pre-marked the

questionnaires and interview sheets from the treatment class with a Q, and the

comparison class with a Z.[19]

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[19]   By design, the interviewer should have been blind to who was in which group, and the teachers were supposed to do all the "Q" and "Z" marking, but what happened in practice was that they just told him.

A one-hour session was established; wherein students were thanked for their participation and reminded that their answers were confidential and did not affect their grades. Students were asked to not leave the room, and if they had to, to leave their questionnaires in the room before leaving.

Students created an alias for themselves in the following way: They would take the first three letters of their mother's first name (if they don't know it, they were to pick their closest female relative's first name), and then add the number of siblings they had (zero though whatever). So for example, if your mother's name was Sharon, and you had 2 siblings, your alias would be SHA2. The observer was on hand to aid them in this process.

During the one hour period when students took the questionnaire, students from the treatment class and two students from the comparison class were selected to be interviewed for 15 minutes each and then returned to their questionnaires in order to complete them.

For complete copies of the questionnaire and interview questions, see Appendix A.

The above instruments were all designed to measure the three P-Factors of Safety, Cooperation and Connections Beyond the Classroom. The fourth P-Factor, Critical Thinking, is in many ways enabled by the other three factors, and therefore would need a different instrument for measurement.

To that end, I needed something to assess student cognitive behaviors, and chose *Instrument#3: The Florida Taxonomy of Cognitive Behaviors* (Webb, 1968, 1970). The Florida Taxonomy is designed to track and identify various types and levels of student

engagement, from basic concrete operations to higher-level synthesis and analysis. Presence of higher-level critical-thinking behaviors has been correlated in the literature with increased achievement (see Chapter 2.3, the P-Factors, particularly section 4).

The validity of the Florida Taxonomy is based upon its derivation from Bloom's Taxonomy (Miller, 1989), based upon Bloom's theories and research (Bloom, 1956). According to Ball & Garton (2002), the Florida Taxonomy is "generally considered to be valid in light of the support given to Bloom's Taxonomy as a means to classify behaviors across levels of cognition" (p. 5). The reliability of the FTCB is dependant upon the raters' use of the instrument (Whittington, 1991 in Ball & Garton, 2002, p. 5)—in other words, how the observer defines and identifies such behaviors.

With that caution in mind, I spent several hours with my observer running "test sessions" on college undergraduates to ensure that both parties agreed on the definitions of those behaviors, and continued to try and ensure that their definitions were in synch during the data collection phase. Once again, we found ourselves with a one point margin of difference.

The fourth and final instrument I employed to collect data was the **Reformed Teaching Observation Protocol (RTOP).** Since my hypothesis is grounded in the theory of Social Constructivism (see 2.2), it would follow that the more constructivist the classrooms in which peaceable schools programs are implemented, the more of an effect they will have. To that end, I visited the study site on one occasion in May (when I could expect classroom routines and culture were well established) to employ the RTOP in an attempt to assess the level of constructivist teaching and learning in the four studied classes. If there were any

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differences between the levels of constructivism in the classes, such data could be interesting to consider.

The RTOP was developed by the Evaluation Facilitation Group of the Arizona Collaborative for Excellence in the Preparation of Teachers (Sawada & Piburn, 2000) to be "an observational instrument designed to measure `reformed' teaching" (Piburn and Sawada, 2000, p.1). The authors define "reformed" teaching as being "characterized primarily by a concern for the structure of the disciplines and for engaging students in authentic inquiry" (p.2)—i.e., the tool is designed to assess the level to which constructivist, inquiry-based teaching is employed. While the authors concede that "there is no common agreement among educators about definitions of constructivism," they have attempted to design their instrument around

> a growing unanimity regarding some of the basic elements of reformed teaching. This unanimity is well documented in the latest editions of the mathematics and science standards released by NCTM (2000) and the National Academy of Sciences (1995, 2000). (p.4)

The instrument draws on the following sources:

• National Council for the Teaching of Mathematics. *Curriculum and Evaluation Standards* (1989).
Professional Teaching Standards (1991), and *Assessment Standards* (1995).
• National Academy of Science, National Research Council. *National Science Education Standards* (1995).
• American Association for the Advancement of Science, Project 2061. *Science for All Americans*(1990), *Benchmarks for Scientific Literacy* (1993)
* *Local Systemic Change Revised Classroom Observation Protocol*, by Horizon Research (1997-98).

The RTOP itself is a 25-item questionnaire that an observer answers based upon observed conditions and behaviors in a classroom. Each item is scored on a scale of 0-4 (4 being most reflective of constructivist principles), leading to a maximum possible score of 100. The RTOP is designed to be used at all levels, from primary education up

through the university. As a criterion-referenced instrument, the RTOP should not be used to reflect comparisons between institutions (p.32).

3.8 Treatment of the Quantitative Data:

Change in scores between pre-test and post-test observations were compared between classes. In addition, qualitative data (interview content, observations, etc) was analyzed in order to inform theories as to why changes, or lack thereof in the quantitative data might have occurred. The specifics break down as follows in order to disaggregate the factors being measured: *Comparative Aspect.*

I performed a multivariate analysis of variance (MANOVA) for the quantitative portion of the data wherein I examined ten dependent variables, as described earlier. The independent variables I tested for potential influence on these dependent variables were arrayed in a nested chain: First, Comparison Class versus Treatment Class. Within each of those categories, the variables were broken down further between Math and English. (This variable also served, thanks to the study design, to divide between each of the two teachers, since there was only one teacher of each subject in the study.) Within *each* of *those* categories, the variable was further subdivided by sex, and then *once again*, within those categories, by racial demographic. See Table 3D for a visual representation of this design.

I used SPSS to conduct an analysis of variance (ANOVA) between independent and dependent variables to attempt to determine if, overall, there were any significant effects along my independent variable axis. ANOVA helped to keep me from mistaking

a comparison that appears significant just by chance, measuring that apparent relationship to the variance in the whole population. If ANOVA found a significant link, I then used a regression analysis to gain more details.

Historical Aspect

Each of the five dependent variables was examined at several intervals throughout the year (grades four times, MPSP scores six times, and each observation instrument eight times). In order for my hypothesis to be true, the later scores would need to be higher in the Treatment class than the earlier ones, *and this difference should either remain constant or, even better, increase, as the year goes on.*

In addition, as more students are exposed to GRAV, everyone's scores should be increasing somewhat. In order for me to even suggest that GRAV could hold some responsibility for this increase, I examined MPSP scores in the last 2 years.

Limitations

Unfortunately, ANOVA tests assume that data is parametric. Of all my dependent variables, none used raw scores that would qualify as parametric data. In truth, the variables all consisted of rank order data. This makes the results less powerful in a statistical sense, but rank order data here (and in most educational studies) was nearly the only data available. The weak effects here are characteristic of educational research.

The small n of this study also severely limited its inferential potential, to the point where Comparison Class vs. Treatment Class is the only comparison that comes close to being statistically potent (and even then, there is the danger of Halo Effects, that a

teacher, despite her best efforts, may still carry over some of the ideas and routines from the treatment into the comparison class). There is also the danger of Hawthorne effect, wherein students perform differently because they know they are being studied, although I had asked the teachers to do their best to obscure which class was the comparison and which was receiving the treatment.

Given the severe financial and temporal limitations of this study, however, this was the best possible arrangement, and thus I present my findings as an exploratory pilot study that is a "proof of concept piece" that, when executed with a significantly large population and with better controls for teacher and school effects, could yield far more generalizable and useful results. The study as it stands has inferential usefulness and can serve as a pioneering attempt, producing suggestions for further study.

3.9 Treatment of the Qualitative Data

Quantitative data can demonstrate potential effects, but can offer little information as to why those effects might be occurring, or to the respondents' understanding of the factors as they are expressed on an instrument. I have collected qualitative data from three sources: student questionnaires (administered to the same four students three times: once in September, once in March, and once in late May) and interviews (drawn from the same population of students who are taking the questionnaire, three times, on that same cycle), and interviews (administered twice, in Sept and in June) with each of the two teachers.

I examined these questionnaires and interviews to see if students perceived a change in the conditions of their classroom environment, if they perceive a change in

their own skill at mastering their classroom content and meeting academic goals, and

whether or not they perceived a connection between these two phenomena. In examining

the transcript of their responses, I used a combination of clustering and dendrogram trees

to organize and reorganize responses into patterns. Along the way I kept a journal in the

service of maximum reflexivity, examining the ways in which my own conduct,

structuring, and preconceptions could be affecting the data and my interpretation of it.

Table 3D: Treatment of Quantitative Data in Comparison Study

Dependent variables			Cls Grd Q1	Cls Grd Q2	Cls Grd Q3	Clas Grd Q4	Raw MPSP #1…6	Standardized MPSP# 1…6	Instrument 1 #1…8	Instrument 2 #1..8
Comparison class	Math	Boys								
		➢ White								
		➢ Black								
		➢ Asian/Pacific Islander								
		➢ Latino/Hispanic								
		➢ Other								
		Girls								
		➢ White								
		➢ Black								
		➢ Asian/Pacific Islander								
		➢ Latino/Hispanic								
		➢ Other								
	ELA	Boys								
		➢ White								
		➢ Black								
		➢ Asian/Pacific Islander								
		➢ Latino/Hispanic								
		➢ Other								
		Girls								
		➢ White								
		➢ Black								
		➢ Asian/Pacific Islander								
		➢ Latino/Hispanic								
		➢ Other								
Treatment class	MaTh	Boys								
		➢ White								
		➢ Black								
		➢ Asian/Pacific Islander								
		➢ Latino/Hispanic								
		➢ Other								
		Girls								
		➢ White								

		➢ Black							
		➢ Asian/Pacific Islander							
		➢ Latino/Hispanic							
		➢ Other							
	E L A	Boys							
		➢ White							
		➢ Black							
		➢ Asian/Pacific Islander							
		➢ Latino/Hispanic							
		➢ Other							
		Girls							
		➢ White							
		➢ Black							
		➢ Asian/Pacific Islander							
		➢ Latino/Hispanic							
		➢ Other							

4.0 PRESENTATION OF THE DATA

4.1 Introduction

This section will present the data collected between September 2008 and June 2009, with the schedule and instrumentation described in Chapter 3.0: Design of the Study and Methodology. Below are summaries and tables with brief analyses of patterns and levels of significance. Chapter 5.0: Discussion and Conclusions, will offer possible explanations for these results with the concomitant implications.

Throughout all of this chapter's tables, unless otherwise indicated, scores are percentages, not raw scores, and all figures are rounded to one decimal place. In addition, although "averages" are often cited, in most cases medians were so close to average that the difference was negligible. I chose to work with averages for the sake of consistency, since some of the data I received from the school records only contained averages, and I had no access to the larger data set from which I could derive medians.

Because of the relative brevity of the results, this chapter will present the data from the whole-school, historical study first.

4.2 Whole-school, historical aspect results

This part of the study compared MPSP scores, and gains in those scores, between two cohorts, the 8th grade students in the 2007-2008 school year and the 8th grade students in the 2008-2009 school year. For more details (particularly concerning peculiarities regarding the n here), see 3.4: Design of the Study. All figures have been rounded to the nearest whole number.

A. Whole-School 8th grade Math MPSP Scores

	MPSP 1	MPSP 2	Gains 1-2	MPSP 3	Gains 2-3	MPSP 4	Gains 3-4	MPSP 5	Gains 4-5	Gains 1-5	Avg. score for all five MPSP tests
07-08 Avg Score	53%	49%	-4%	56%	8%	52%	-4%	43%	-9%	-11%	53%
08-09 Avg Score	54%	58%	2%	60%	2%	61%	3%	52%	-9%	-3%	58%
Percent Improvement	+2%	+9%	+6%	+5%	-6%	+10%	+7%	+9%	0%	+8%	+5%

Whole-School 8th grade ELA MPSP Scores

	MPSP 1	MPSP 2	Gains 1-2	MPSP 3	Gains 2-3	MPSP 4	Gains 3-4	MPSP 5	Gains 4-5	Gains 1-5	Avg. score for all five MPSP tests
07-08 Avg Score	63%	69%	+7%	65%	-4%	49%	-17%	60%	+10%	-3%	63%
08-09 Avg Score	63%	65%	+3%	66%	0%	60%	-7%	64%	+4%	+1%	64%
Percent Improvement	0%	-4%	-4%	+1%	+4%	+11%	+10%	-4%	-6%	+4%	+1%

Visual Observation of the Data: As compared to the previous year's 8th grade scores, this year's scores stayed more or less constant in ELA (the actual gain, to two decimal places, was .78%) and rose 4 percent in Math. Gains from test to test were, with the exception of the jump from Test#2 to Test#3, consistently in the 7-9 percent range in Math, while ELA was far more erratic.

Statistical Analysis: ANOVA found no significant correlation between any of the independent variables (year 07-08 vs. 08-09, and the teacher) and the dependent variables in ELA MPSP scores. There was one significant correlation (at the .007 level) between Math MPSP gains from test#2-test#3 and year of attendance, and there was *nearly* a significant correlation (.077 level) between average Math MPSP score and year of attendance, and an even closer *near* significant correlation (.06 level) between Math

MPSP score on test#3 in particular and the year of attendance.

4.3 Comparative Study results: Assessment Data

Below are results for each of the dependent variables studied:

A. Math MPSP Scores

Class Average for	Treatment	Comparison
Test1	33.6	38
Test2	38.3	47.2
Test3	42	47
Test4	44.4	44.3
Test5	51.9	51.2

Visual observation of the data: The treatment group starts out behind the comparison

group and then catches up quickly. The comparison group seems to have a rapid rise, but

then slides down again, and ends up in just about the same spot at the end.

 Statistical analysis: ANOVA and Regression Analysis found a significant correlation at

the .041 level between being in the treatment group and the *percentage gain* (but *not* the

arithmetic increase) from the beginning to the end of the year.

B. Math Class Quarter Grades

Class Average for	Treatment	Comparison
Quarter 1	76.8	78
Quarter 2	68.3	71.2
Quarter 3	72.4	74.5
Quarter 4	72.3	74.4

Visual observation of the data: The treatment group starts out, and remains, behind the

comparison group all year. It makes a sharp decline during the second quarter, and then

climbs partway back up, remaining there for the last two quarters. The comparison group

has almost as sharp a drop between quarters one and two, and follows a similar pattern of

partial recovery that holds steady.

Statistical analysis: ANOVA and Regression Analysis found no significant correlations between being in the treatment group and either the percentage gain or the arithmetical increase in grades.

There was, however, a correlation at the .017 level of significance between the percentage change in a student's math grade over the year and that student's being in the treatment group *and* waiting to take GRAV until fourth quarter. There was also a .029 level of significance for this group of students in connection with the actual arithmetical change in their math grade over the course of the year.

C. ELA MPSP Scores

Class Average for	Treatment	Comparison
Test1	59.7	57.8
Test2	66.3	59.8
Test3	57.1	55.1
Test4	52.6	45.3
Test5	56.6	56.8

Visual observation of the data: The treatment group starts out ahead and rises quickly, then steadily falls until, at the end, it is even with the comparison group. The comparison group has slow rise and fall, a dramatic (perhaps fluke?) drop towards the end, and then an equally dramatic recovery.

Statistical analysis: ANOVA and Regression Analysis found no correlations between being in the treatment group and the either percentage gain or the arithmetical increase, with one exception: percentage gain between test#3 and test#4, where the p value was at the .02 level of significance.

D. ELA Class Quarter Grades

Class Average for	Treatment	Comparison
Quarter 1	76.3	82.2
Quarter 2	68.3	85
Quarter 3	81.8	87.8
Quarter 4	82.8	89.7

Visual observation of the data: Contrary to its higher beginning MPSP scores, the

treatment group starts well behind the comparison group here in grades, and never

catches up. While the comparison group steadily climbs, the treatment group drops

sharply at first (much like it does in MPSP scores), then recovers and indeed exceeds

where it began, but not by quite as much as the comparison group (6.5 points versus 7.5

points). It is not even a bigger percentage gain (about 9% vs. about 11%)

Statistical analysis: ANOVA and Regression Analysis found no significant correlations

between being in the treatment group and either the percentage gain or the arithmetical

increase in grades in the first two quarters. In quarters three and four, however, there was

a strong correlation, at the .013 level of significance, between being in the treatment

group and the grade a student received in Quarter 3 and in Quarter 4.

E. Average MCAS Test scores

Class Average for	Treatment	Comparison
MCAS Math	219.7	221.4
MCAS ELA	231.6	233.2

Visual observation of the data: The treatment class clearly did worse than the comparison

class on the MCAS.

Statistical analysis: ANOVA and Regression Analysis found no significant correlations

between being in the treatment group and a student's MCAS grade. However, when

GRAV was factored in, there was a correlation at the .025 level of significant between a student's ELA MCAS grade and their being in both the treatment group *and* having taken GRAV second quarter, and a .020 level correlation between their Math MCAS grade and their being in the treatment group *and* having taken GRAV in the 3rd quarter.

F. Math - Relative Performance on MPSP Tests vs. the Entire Eighth Grade

	Test1	Test2	Test3	Test4	Test5
AVERAGES	54.39%	58.12%	60.10%	61.40%	52.32%
TREATMENT CLASS	33.60%	38.30%	42.00%	44.40%	51.90%
COMPARISON CLASS	38.00%	47.20%	47.00%	44.30%	51.20%
TREATMENT IS AHEAD OF SCHOOL AVG BY:	-21%	-20%	-18%	-17%	0%
COMPARISON IS AHEAD OF SCHOOL AVG BY:	-16%	-11%	-13%	-17%	-1%

Visual Observation of the Data: While both classes start behind the school average, the comparison class is still ahead of the treatment class at the beginning. Both classes close that gap by the end of the year, and are both nearly even at the school average by May.

G. ELA - Relative Performance on MPSP Tests vs. the Entire Eighth Grade

	Test1	Test2	Test3	Test4	Test5
AVERAGES	63.15%	65.34%	66.13%	59.79%	64.48%
TREATMENT CLASS	59.70%	66.30%	57.10%	57.60%	56.60%
COMPARISON CLASS	57.80%	59.80%	55.10%	45.30%	56.80%
TREATMENT IS AHEAD OF SCHOOL AVG BY:	-3.45%	0.96%	-9.03%	-2.19%	-7.88%
COMPARISON IS AHEAD OF SCHOOL AVG BY:	-5.35%	-5.54%	-11.03%	-14.49%	-7.68%

Visual observation of the data: While both classes begin behind the school average in

September, the comparison class shoots ahead mid-year relative to the student body as a whole, before dropping behind again at year's end. By May, both comparison and treatment classes are in nearly identical spots, and both are behind the school average.

4.4: Comparison Study: P-Factor SCC Scale Observations

A hired observer visited all four classrooms on six separate dates spread throughout the school year (see Chapter 3.0: Design and Methodology of the Study). There he assessed classroom activities on 15 separate indices to test for the presence of the P-Factors, factors that, from the literature search, were determined to be associated with both peaceable environments and higher student achievement. If my hypothesis was correct, a classroom with a higher presence of the P-Factors would be one where students both felt safer and were more likely to be achieving at higher levels. Such infrequent "dipsticking" is of limited statistical value but may still provide some useful evidence. The full results are on the next page. The summarized results are as follows:

A. Summary of results

	Average percentage increase in reported P-Factors
Math comparison group	+31.3%
Math treatment group	+37.5% this is positive
ELA comparison group	-206.5%
ELA treatment group	+281.25% this is positive

Visual observation of the data:
In Math, both classes seemed, according to the indicators, to grow more peaceable as the year went on. The treatment group made stronger gains here. In ELA, there seems to be dramatic increases and decreases in P-factor presence.
Statistical Analysis:

ANOVA and Regression Analysis found no significant relationship between any of the survey items and the results they produced.

B. Full Survey Results

MATH COMPARISON	Friendly&Relaxed	Respect right to work	Respect opinions	Respect feelings	Respect physical person	Respect sexual boundaries	Assist one another
11-Sep	3	5	1	3	5	5	3
23-Oct	5	5	5	5	5	5	1
4-Dec	6	4	1	5	5	5	1
15-Dec	6	5	1	5	5	5	3
22-Jan	6	5	5	5	6	5	5
25-Mar	5	2	5	5	5	5	5
27-May	6	6	1	6	5	5	4
Average:		5.285714	4.571429	2.714286	4.857143	5.142857	5	3.142857
Change start to end		3	1	0	3	0	0	1
		300.00%	100.00%	0.00%	300.00%	0.00%	0.00%	100.00%

Are collaborative	Work interdependently	Listen actively	Contribute opinions	Maintain norms	Respect process of negotiation	Show positive affect/respect for teacher	See relevance to other subjects
1	1	5	1	5	1	5	1
1	1	1	4	4	1	5	1
1	1	1	1	5	1	6	3
1	1	1	1	5	1	5	1
1	1	1	1	5	1	5	1
1	1	1	1	3	1	4	1
1	1	1	1	5	1	6	1
1	1	1.571429	1.428571	4.571429	1	5.142857	1.285714
0	0	-4	0	0	0	1	0
0.00%	0.00%	-400.00%	0.00%	0.00%	0.00%	100.00%	0.00%

See relevance beyond classroom

1
1
3
1
1
1
1

1.285714

0AVG change: 0.3125

0.00%   31.25%

MATH TREATMENT		Friendly&Relaxed	Respect right to work	Respect opinions	Respect feelings	Respect physical person	Respect sexual boundaries	Assist one another
	11-Sep	5	3	5	5	5	5	1
	23-Oct	5	5	5	5	5	5	1
	4-Dec	5	2	1	5	4	5	3
	15-Dec	6	3	3	3	3	5	3
	22-Jan	6	3	1	5	5	5	5
	25-Mar	5	5	5	6	6	5	3
	27-May	6	6	5	5	5	5	4
Average:		5.428571	3.857143	3.571429	4.857143	4.714286	5	2.857143
Change start to end		1	3	0	0	0	0	3
		100.00%	300.00%	0.00%	0.00%	sh0.00%	0.00%	300.00%

Are collaborative	Work interdependently	Listen actively	Contribute opinions	Maintain norms	
5	1	1	1	3
1	1	5	4	5
1	1	3	1	5
1	1	1	1	5
1	1	1	1	5
3	1	3	1	5
1	1	1	1	5
1.857143	1	2.142857	1.428571	4.714286
-4	0	0	0	2
-400.00%	0.00%	0.00%	0.00%	200.00%

Respect process of negotiation	Show positive affect/respect for teacher	See relevance to other subjects	See relevance beyond classroom	
3	3	1	1
1	6	1	1
1	3	3	3
1	1	1	1
1	3	1	1
1	6	1	1
1	6	1	1
1.285714	4	1.285714	1.285714
-2	3	0	0
-200.00%	300.00%	0.00%	0.00%

AVG change: 0   0.375

37.50%

ELA COMPARISON
Friendly&Relaxed

	Respect right to work	Respect opinions	Respect feelings	Respect physical person	Respect sexual boundaries		Assist one another
11-Sep	5	3	5	5	4	5	1
23-Oct	6	3	6	2	5	5	6
4-Dec	6	2	1	3	5	5	1
15-Dec	6	6	6	5	4	5	5
22-Jan	6	5	1	5	4	5	6
25-Mar	6	6	5	3	6	5	3
27-May	6	6					

Are collaborative	Work interdependently	Listen actively	Contribute opinions	Maintain norms	Respect process of negotiation	Show positive affect/respect for teacher	See relevance to other subjects	See relevance beyond classroom
1	1	1	1	1	5	1	5	1	1
6	5	6	1	3	1	6	1	1
1	1	1	1	5	1	3	3	3
1	1	5	1	5	1	6	1	1
1	1	1	1	5	1	6	1	1
1	1	1	1	5	1	6	1	1

ELA TREATMENT
Friendly&Relaxed

	Respect right to work	Respect opinions	Respect feelings	Respect physical person	Respect sexual boundaries	Assist one another	Are collaborative	Work Interdependently
11-Sep	1	3	4	5	2	5	5	5	1
23-Oct	5	2	2	3	3	5	1	5	1
4-Dec	6	3	5	5	4	5	3	5	1
15-Dec	6	7	1	6	5	5	5	1	1
22-Jan	6	5	5	5	5	5	5	1	1
25-Mar	6	4	1	5	5	5	3	1	1
Average:	5	4	3	4.833333	4	5	3.666667	3	1
	6	4	1	5	5	5	3	1	1
	600.00%	400.00%	100.00%	500.00%	500.00%	500.00%	300.00%	100.00%	100.00%

Listen actively	Contribute opinions	Maintain norms	Respect process of negotiation	Show positive affect/respect for teacher	See relevance to other subjects	See relevance beyond classroom	
5	1	5	1	6	1	1	
1	1	3	1	5	1	1	
1	3	5	1	5	1	1	
6	1	4	1	6	1	1	
1	1	5	1	6	1	1	
1	1	3	1	6	1	1	
2.5	1.333333	4.166667	1	5.666667	1	1	
1	1	3	1	6	1	1	AVG change: 2.8125
100.00%	100.00%	300.00%	100.00%	600.00%	100.00%	100.00%	281.25%

* In the case of the ELA classroom, the May 26 observations could not be completed due to extenuating circumstances

4.5: Comparison Study: Florida Taxonomy

In most cases, the student activity was firmly in level one (Knowledge). However, the two classes that at times poked as high as level three (Application) were the Math Treatment group and the ELA comparison group.

4.6: Comparison Study results: P-Factor SCC student survey data

Student self-reports as to their perceived feelings of safety and achievement were collected at three times during the year. Randomly selected students were picked from the comparison and treatment classes and answered a 108-question survey (for more information on the survey see Chapter 3.7 Details of instruments for data collection).

Table 4.6-A: Population values for survey questionnaires

Month	N of Treatment students	N of Comparison students	Total N
September	3	5	8
January*	2	1	3
March	15	8	23
May	12	14	26

* The January surveys were not considered in my analysis due to their small sample size and severely outlying results.

<u>Analysis of the Data</u>:

In analyzing the survey data, I first grouped the questions into categories. Not all 108 of the questions were deemed relevant for study.

Assessment of classroom safety (11 questions)

Assessment of the teacher's role in promoting a positive environment (2 questions)

Assessment of academic level in your class (5 questions)

Assessment of level of cooperativeness in your class environment (9 questions)

Assessment of relevance of your classroom activities to the real world (1 question)

<u>Caveats:</u>

1. These surveys do not distinguish between ELA and Math. Treatment students were treatment students in both classes, and comparison students were comparison students in both classes. Depending on which teacher administered the test on a given occasion, the student commented on that teacher's classroom. Since students took these tests at several different times, I unfortunately do not have information on which teacher's class a given student is talking about. However, since the students in the treatment group were in the treatment group for both their Math and English classes, there is at least consistency on that point.

2. The study's design called for the same students to take the questionnaire throughout the year to examine for possible evolution and change. However, the cooperating teachers proved unable to arrange this. Thus, the same students were not always present in each cohort; in other words, these surveys do not necessarily represent the same individuals' progress throughout the year, nor do they necessarily represent comments on the same *teacher*. Some are the same, and some change. No student took every questionnaire.

The full results are in Table 4.6-B. The summarized results are below:

A. Summarized Results

Assessment of classroom safety: Throughout their responses to these 10 questions, the treatment group starts off reporting 53.3 percent less safety in their class than the comparison group does. That gap steadily narrows until, by May, they only report 2.3 percent less safety.

Assessment of the teacher's role in promoting a positive environment: On both questions, this issue fluctuates significantly throughout the year, ending up pretty much where it started, with the treatment group reporting 16.7 percent less favorable estimation of their teacher than the comparison group.

Assessment of academic rigor in your class: On these three questions designed to ask how challenging the class felt, the treatment group reports 44.4 percent lower estimation of the class's academic rigor than the comparison group. This has dropped to 34.9 percent in March, and by May, the treatment class now reports a 19.4 percent *greater* estimation of their class's rigor than the comparison kids do.

Assessment of cooperation level in your class: On all 9 of these questions, students in the treatment group begin 100 percent behind the students in the comparison group, but have nearly halved that gap (49.2% behind) in March, and by May are almost even with the comparison group on this perception (and are in fact .4% ahead). This matches the observations of cooperation as getting higher in the treatment group by the observer on the P instruments.

Assessment of relevance of class material to the outside world: On this question, students in the treatment group begin 100 percent behind the students in the comparison group,

but have knocked that gap down by two thirds (29.4% behind) in March, and by May

report being ahead of the comparison group on this perception by 73.8 percent.

Assessment of your perception of teasing in your class: Students were asked two

questions: "How would you rate [your ELA and Math] class in terms of how much kids

tease you?" and "How would you rate [your ELA and Math] class in terms of how much

kids are teased in general," to which they had to respond on a scale of 1-3 (a response of

1 indicating less than other classes, 2 being the same, and 3 being more). The treatment

class starts off with 33.3 percent better ratings in terms of students ranking it as having

less teasing. By March, though, it falls to 50 percent behind the comparison group. By

May it catches up almost even with the comparison group in terms of student perceptions

of teasing in general (it is just .08 percent behind), and has caught up less dramatically in

students' perceptions of their own teasing (still 25 percent behind).

Table 4.6- B – Full Results of the Surveys

(For n values in each cohort and month, see Table 4.6-A)

September Administration

Question Cluster	Number of Questions in the Cluster	Average Score of Comparison Students' Responses	Average Score of Treatment Students' Responses	Percentage difference in favor of the Treatment Group
Assessing classroom safety (where a score of 5 is best)	10	2.56	2.03	-53.33%
Assessing classroom safety (where a score of 1 is best)	1	1.67	1.33	33.33%
Assessing the positive contributions of the teacher (Where 5 = best)	2	1.83	1.67	-16.67%
Assessing the level of classroom rigor/challenge (Where 5 = best)	3	1.88	1.44	-44.44%
Assessing the level of classroom rigor/challenge (Where 1 = best)	2	1.83	1.66	+16.67%
Assessing the level of cooperative learning in	9	3.00	2.00	-100.00%

the classroom (Where 5= best)				
Assessing the level of relevance to the "real world" (Where 5 = best)	1	4.00	3.00	-100.00%
Do you feel you are teased less in this class than in other classes? (1=less,2=same,3=more)	1	1.33	1.33	+33.33%
Do you feel that other students in the class are teased less here than in other classes? (1=less,2=same,3=more)	1	1.33	1.33	+33.33%

January Administration

Question Cluster	Number of Questions in the Cluster	Average Score of Comparison Students' Responses	Average Score of Treatment Students' Responses	Percentage difference in favor of the Treatment Group
Assessing classroom safety (where a score of 5 is best)	10	3.5	2.45	-105.00%
Assessing classroom safety (where	1	4	1	+300.00%

a score of 1 is best)				
Assessing the positive contributions of the teacher (Where 5 = best)	2	2.5	3	+50.00%
Assessing the level of classroom rigor/challenge (Where 5 = best)	3	2	2	0%
Assessing the level of classroom rigor/challenge (Where 1 = best)	2	4	2	+200.00%
Assessing the level of cooperative learning in the classroom (Where 5= best)	9	3.06	2.61	+44.84%
Assessing the level of relevance to the "real world" (Where 5 = best)	1	3.08	2.60	-49.12%
Do you feel you are teased less in this class than in other classes? (1=less,2=same,3=more)	1	No data	No data	No data
Do you feel that other	1	No data	No data	No data

students in the class are teased less here than in other classes? (1=less,2=same,3=more)				

March Administration

Question Cluster	Number of Questions in the Cluster	Average Score of Comparison Students' Responses	Average Score of Treatment Students' Responses	Percentage difference in favor of the Treatment Group
Assessing classroom safety (where a score of 5 is best)	10	2.98	2.52	-45.63%
Assessing classroom safety (where a score of 1 is best)	1	2.56	2	+55.56%
Assessing the positive contributions of the teacher (Where 5 = best)	2	3.17	2.50	-66.67%
Assessing the level of classroom rigor/challenge (Where 5 = best)	3	2.11	1.76	-34.92%
Assessing the level of classroom rigor/challenge (Where 1 = best)	2	3.06	2.61	+44.84%
Assessing the	9	3.09	2.60	-49.12%

level of cooperative learning in the classroom (Where 5= best)				
Assessing the level of relevance to the "real world" (Where 5 = best)	1	3.22	2.93	-29.37%
Do you feel you are teased less in this class than in other classes? (1=less,2=same ,3=more)	1	1.33	1.33	-50.00%
Do you feel that other students in the class are teased less here than in other classes? (1=less,2=same ,3=more)	1	1.5	1	-50.00%

May Administration

Question Cluster	Number of Questions in the Cluster	Average Score of Comparison Students' Responses	Average Score of Treatment Students' Responses	Percentage difference in favor of the Treatment Group
Assessing classroom safety (where a score of 5 is best)	10	2.86	2.84	-2.26%
Assessing classroom	1	2.36	2	+35.71%

safety (where a score of 1 is best)				
Assessing the positive contributions of the teacher (Where 5 = best)	2	3.00	2.83	-16.67%
Assessing the level of classroom rigor/challen ge (Where 5 = best)	3	2.00	2.19	+19.44%
Assessing the level of classroom rigor/challen ge (Where 1 = best)	2	2.43	2.46	-2.98%
Assessing the level of cooperative learning in the classroom (Where 5= best)	9	3.02	3.03	+.40%
Assessing the level of relevance to the "real world" (Where 5 = best)	1	2.93	3.67	+73.81%
Do you feel you are teased less in this class than in other classes? (1=less,2=sa me,3=more)	1	1.33	1.08	-25.00%
Do you feel	1	1.67	1.58	-8.33%

that other students in the class are teased less here than in other classes? (1=less,2=same,3=more)				

4.7 Comparative Study Results: Analysis of Qualitative Data

A. Introduction

Qualitative data was collected through two methods:

1. Four open response questions from the abovementioned questionnaires (#76, #77, #109, #110). See 4.6 for a reminder of demographics and comparison/treatment breakdown.

2. In September, January, and in May, on the same days, questionnaires were distributed. Some students who were to take the questionnaires were selected (randomly, but with an eye towards balancing comparison/treatment) for a personal interview. This interview consisted of 18 questions designed to address feelings of safety and support, particular in the studied classes (their particular Math and ELA section) *vis a vi* other classes the student had taken or was currently taking.

Month	N of Treatment Students	N of Comparison students	Total N
September	2	2	4
January*	2	4	6
May	4	4	6

Caveat:

The study's design called for the same students to be interviewed throughout the year to examine for possible evolution and change. However, the cooperating teachers proved unable to arrange this. Thus, the same students were not always present in each cohort— in other words, these surveys do not necessarily represent the same individuals' progress throughout the year. Some are the same, and some have changed. No students took every questionnaire. With this in mind, the following results may be of very limited value, but of some value nonetheless.

B: Analysis of Interview Data:

I began coding through a combination of clustering and dendrogram trees. The two trees began at the following root levels:

1. Responses by Month   2. Responses by Comparison v. Treatment

Responses were then clustered by key words, particularly words related to safety, fear, belonging, and academic engagement. Within these responses, additional clustering was used, although the small size of the sample limited further clustering at this point.

Patterns that remained consistent year-long *and* across comparison v. treatment included:

* reporting of friends and out-of-class activities as the aspects of school that students enjoyed most

* reporting of teachers' efforts to maintain safety as the factor that made students feel safest

* reporting of student-generated violence as the factor that made students feel the least

safe. Within this category, nearly all of the incidents reported were of physical violence ("hitting," "knives," "weapons," "incident with box-cutter," "gang action") as opposed to social/relational aggression, such as teasing.

Patterns that remained consistent year-long but which varied between comparison and treatment groups included:

* Comparison students reported their classroom felt safer than other classes, while treatment students reporting no perceived difference between safety levels in their class and in other classes.

* When asked a follow-up question as to why, the comparison students' explanations consistently focused on a lack of relational aggression, containing phrases like "no teasing" and "no mistreatment." This is particularly interesting given the previous comments about lack of safety tended to be about physical violence, but as mentioned earlier, this might well be accounted for by the fact that different students may have taken the questionnaire.

* When asked why they believed the classes were different in this way, the comparison students consistently credited the teacher, with phrases like: "teachers are more strict and in control," and "some classes are not as controlled as this one," "the teachers know how to keep rules and keep quiet," "the teacher is more calm and understanding."

* Comparison students also reported that both their ELA and Math classes were more relevant to the real world than other classes they had taken/were taking. Treatment students did not report this.

* When asked a follow-up question as to the reasons for these differences, comparison students again credited the teachers: "they teach for full understanding," "they teach

better and are more understanding," "they want to get us ready [for future grades]."

Patterns that varied over the course of the year included:

* Within the comparison group, students consistently reported their ELA class as having less group work than other classes in Sept and in January, but in May reported that it had more group work. (The treatment students, throughout the year, reported no difference in group work as compared with their other classes.)

* Within the comparison group, students reported no perception of learning more in their ELA and Math classes than in other classes in September and in January, but did report a perception of learning more come May. The treatment group consistently saw no difference.

C. Analysis of Questionnaire Data

For analysis of the open-response questionnaire items, the same method of dendrograms and clustering was used to code and process this data.

Patterns that remained consistent year-long *and* across comparison v. treatment included:

* With only one exception, when asked to name the class in which the student perceived he or she was teased the most, no students listed their ELA or Math class.

Patterns that remained consistent year-long but which varied between Comparison and Treatment groups included:

* Math class received 6 mentions as the class in which the student perceived he or she was teased least. Of these 6 mentions, 5 were from the comparison class.

Patterns remained consistent across comparison v. treatment but that varied over the course of the year included:

* When asked for suggestions as to "how the school could improve," the September and March responses included several mentions of safety-related concerns, including "make the school safe," "have a separate class for the bad kids so they don't interfere," "better behavior with students" and "solve things without fighting." In all, there were 7 of such responses. By May, however, there was only one response that could qualify as safety-related ("people should stop trying to put other people down"). Instead, the big pattern in May's responses appeared to involve changes to school curricula and structures (12 such responses), including 3 calls for "more programs" or "activities," 3 critiques of teachers being "too strict" or too focused on "rules," 2 calls to enforce rules *more*, 1 call for less homework, and 1 call for better food.

* By May, three students had marked treatment classes as those in which they received the least teasing. While still totaling behind the comparison class by a factor of two in this category, this change is interesting.

4.8 Comparative Study Results: RTOP scores

My visit to the classroom to employ the RTOP was in late May, when I expected classroom routines and patterns would be well-established. Since the P-Factors, according to the theoretical grounding of Social Constructivism (see 2.2), would seem to interface best in a constructivist classroom, I thought it might be useful to assess just how "constructivist" each of the four classes were, and examine any possible differences between them.

The results are below:

RTOP Item#	ELA Treatment	ELA Comparison	Math Treatment	Math Comparison
1	0	0	0	0
2	3	3	3	3
3	0	0	0	0
4	1	1	1	1
5	0	0	0	0
6	3	3	3	3
7	3	3	3	3
8	4	4	4	4
9	0	0	0	0
10	0	0	0	0
11	2	2	2	2
12	2	2	2	2
13	0	0	0	0
14	2	2	2	2
15	1	1	1	1
16	2	2	2	2
17	2	2	0	0
18	0	0	0	0
19	2	2	0	0
20	2	1	2	2
21	3	3	3	3
22	3	3	3	3
23	4	4	4	4
42	2	2	2	2
25	0	0	0	0
TOTAL SCORE:	41	40	37	37

Visual Analysis of the Data:

All four classrooms scored low in terms of their level of constructivism. There was also

almost no difference between the level of constructivism between Math and ELA classes,

or between treatment and control classes within a subject.

Caveats:

The RTOP was designed with math and science classrooms in mind, which may have limited its applicability to the ELA classes I observed, and the fact that, according to its authors, "the RTOP should not be used for research purposes by untrained observers" (p.1). To both of these caveats, I answer that I have studied enough constructivist theory, including years of observations of other classrooms and years of employing such conditions in my own classes, that I feel confident in my ability to effectively employ the RTOP. Even so, I read the RTOP's training guide to orient myself to the specifics of the instrument.

Far more significant a concern is that one single visit does not by any means constitute a statistically significant sample. However, this data seems to match the trend in the longer-term collection of data from the Florida Taxonomy (see 4.5), designed to address levels of critical thinking, which also pointed to lower, more concrete classroom activities rather than the higher level ones associated with constructivist classrooms.

5.0 DISCUSSION AND CONCLUSIONS

5.1 Discussion of the Quantitative Data

In the historical study's examination of whole-school gains between this year and last year, any significant correlations—and only one was found—are of severely limited value. Isolating the implementation of GRAV as a potential significant factor is not feasible, given the immense number of other variables involved.

In the comparison studies, in regards to ELA, data that supports the hypothesis is negligible. The significant correlation between being in the treatment group and having a higher score on the fourth ELA MPSP score test is most likely due to the fluke low score for the comparison group on that same test, and not due to anything in the treatment. When examining quarter grades, I am not sure what to make of the strong correlations in the second semester. The fact that they are both at the identical level of significance seems suspicious, although their average final grades are so similar (81.2 and 82.8) so maybe that is not so surprising.

Slightly more promising were the results in Math, which included significant links between the treatment group and percentage gain in Math MPSP scores. Of course, it is always easier to make large percentage gains if you start at a low level (for example, if a student had a 20 percent average, and raised it to a 40 percent, that student would have a 200 percent percentage gain, but still a poor grade). However, since schools are always trying to help those struggling students who are weakest, this could be of interest.

The fact that MPSPs are not precisely cumulative tests does weaken this finding, but data from gains in Math quarter grades, which are more cumulative in nature, also shows some support for the hypothesis. However, the treatment group does narrow the

gap between its grades and the comparison group's grades by the end of the year, as follows:

Gap of 2.8 points→2.9→2.1→2.1

This could suggest, as with the Math MPSP scores that the treatment helped the kids catch up. Significant correlations here were only found when GRAV was factored in, and then, only at the end of the year. This might indicate that indeed, at year's end, when most of the kids had been exposed to GRAV, the classroom felt safer and the remaining kids benefited more.

In regards to MCAS scores, given how much weaker the treatment class started out in Math, one could perhaps make the argument that the fact that they came as close as they did to the comparison class by the year-end MCAS assessment is interesting and perhaps encouraging. However, weak controls over the difference between the treatment and comparison groups in the study problematize this claim. The GRAV correlations here seem to be statistical flukes.

The observational and survey data is of extremely limited statistical value, for reasons already explained. As expected, ANOVA and Regression Analysis found no significant relationship between any of the survey items and the results they produced.

The P-Factor SCC results, if the figures could be trusted, would seem to refute my hypothesis that peaceable spaces create better achievement, as here we have an increasingly less peaceable classroom outperforming the increasingly more peaceable classroom. However, without the May data (extenuating circumstances prevented May observations from being undertaken), any analysis will be incomplete. I am particularly suspicious because March, the last time data was collected for ELA, constituted that

outlying third quarter where MPSPs precipitously dropped for the comparison class, which could seem to support the theory that as peaceability falls, so too does achievement.

The last four columns for both groups, but especially the comparison group, are in line with that the RTOP's findings that there doesn't seem to be much cooperative or constructivist learning going on in either class. However, the treatment class does seem to support one another slightly better. According to constructivist theory, it follows that classrooms with low levels of constructivism will perform at low levels in the Bloom sense, a theory that the data from the Florida Taxonomy supports. Within the low levels observed, Math classes climb a bit higher, supporting the growing picture that the treatment, if it was in fact responsible for any gains, seems somewhat effective in the Math class and not at all in the ELA class.

In examining the survey data, the class that is doing better academically (the comparison class) also reports feeling safer, on the "safety" questions and on the "teasing" questions. This would seem to match the body of theory backing up the P-Factors. Since the treatment class begins behind the comparison class academically, and then narrows the gap (dramatically in Math, far less so in English) by year's end, then the fact that their perceptions of safety also increase fits with the theory and would seem to support the hypothesis—as the treatment is given, the students feel safer and thus start to achieve at higher levels. There is likely a feedback effect, as well—they do better because they feel safer, and then feel safer because they are more comfortable with their achievement level.

The fluctuation in student perceptions of the teachers' role in promoting a positive environment is puzzling. Mr. Harris, the Math teacher, attributed this to "some tough personalities in [the treatment] class who began the year bullying, stopped for awhile, and started up again." He attributes the results to "the inconsistent behavior of one of two students who may have caused a great deal of the fluctuation."

The student assessments of academic level also seem difficult to reconcile with the class's actual outcomes. Here, too, Mr. Harris offers a possible explanation involving student self-esteem:

> As most of the treatment group bought into a safe environment where they were comfortable taking chances, the class became more interesting and fun, and the students became more invested, as they saw the results their hard work could bring forth. I remember talking with one student who went from a 28% on the first MPSP all the way to a 70% by the third. He wasn't happy because it was barely passing, but once I pointed out the improvement, he was very excited and continued to work very hard. Once students felt safe and saw improvement, they became more focused and invested, and the cycle continued to snowball.

The higher student assessment of cooperation in the treatment class matches the observations of increased cooperation in the treatment group (as measured on the P-Factor SCC Scale), which again could reflect the more rapid progress of the treatment Math class.

5.2 Discussion of the Qualitative Data

As mentioned in the caveats section of 4.7, it is difficult to draw any meaningful conclusion from student interview data, given the small sample and the inability to track progress in a given student's responses. It is difficult even if any two students are speaking about the same teacher. However, one can point to some rough trends that seem

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to match trends in the quantitative data: students in the comparison classes reporting as the "safer" of the two groups, on all of the P factors, and within that, a favoring of the math class in particular. Also, as in the quantitative data, there seems to be some "catch-up" with the treatment class, leading to greater equivalency between the two by year's end, which matches the "catch-up" effect seen in so many other places.

The apparent universal drop in safety-related concerns by May might speak well of the effects of the GRAV program, or might be attributable to other factors, such as increasing maturity with age.

That students saw their friends and extracurricular activities as the most rewarding parts of their school life, as opposed to the classroom activities, did not seem surprising. However, they did credit their teacher as the key element that made their classrooms safe or not, which is also traditional and expected (Jablon, 2007). Commenting on this trend, Mr. Harris said:

> There are, to some extent, students who stick up for each other. However, at this age, I think a lot of it has to do with the students eventually learning to trust that the teachers will not allow bullying and disrespect to take place. The tone is set from day one that learning in a safe environment is critical, and disruptions will not be tolerated. Students gradually become more and more comfortable expressing thoughts and taking chances, as they recognize that the troubled students will either be respectful or have to leave class. As the year progressed, there was definitely more of a team atmosphere (and sticking up for each other) in the treatment class, which will hopefully continue into high school.

In general, Mr. Harris seemed to feel the treatment had been effective, while Ms. Sommers, the ELA teacher, did not report so positive a picture. She used phrases like "I'm frustrated" and "There are [still] many discipline problems." She also spoke of confusion caused by a new department chair who, in Ms. Somers' estimation, handed down sudden new mandates without an understanding of the "situation on the ground," as

it were: "She comes in once a month with new stuff—like, 'Here's the new vocab,' on short notice—it's very difficult."

5.3 Conclusions and Recommendations for Further Study

As mentioned several times earlier, this study is a pilot, a proof-of-concept piece operating under significant limitations including small population size, limited ability to collect repeated and consistent observational and survey data from the students, inability to link up and make consistent the influence of the two treatments (GRAV and the additional measures), and the presence of many confounding variables in the school. In terms of the historical study, the fact that GRAV's implementation did not affect all students at once severely confounded this aspect of the research. In the comparison study, the rather minute difference in what the students consistently received in the treatment and comparison group also made analysis and conclusion extremely difficult. The fact that the same teacher taught each group, while advantageous in controlling for teacher, may well have polluted the study via the Halo Effect since it is nearly impossible for a teacher not to "leak" techniques used with one group over to the other group of students. In his summer interview, Mr. Harris conceded that,

> although [the treatment] activities were done with only the experimental
> class, some of the ideas and theories rubbed off on the control class. Also, our
> team is very strict when it comes to a no bullying concept, and that stretched
> across all of the classes.

What this study truly needed was a major, consistent effort for all the peaceable schools interventions to occur in one group, and to have virtually none in the other. This danger

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was present from the beginning, as both teachers raised concerns from the outset that if they felt a certain procedure would help students, they would feel ethically obligated to not withhold it from any of their kids.

Perhaps counterbalancing this shortcoming, but creating another worse one, was that the implementation of the TSBP and Conflict Resolution activities by the treatment teachers seemed minimal in comparison to what the programs' authors expect from a well-trained, committed educator, and indeed what was implemented in previous studies (Stevahn, Johnson, D. W., Johnson, R. T., & Real, 1996; Stevahn, Johnson, D. W., Johnson, R. T., Laginski, & O'Coin, 1996 ; Stevahn, Johnson, D. W., Johnson, R. T., Green, & Laginski, 1997).

The data, however variegated and problematic, does paint a consistent picture that the comparison group overall experienced superior academic performance when compared with the treatment group. However, it also reflects how the two groups were not evenly matched at the outset. As mentioned in Chapter 3.3: Characteristics of the Population, the teachers specifically chose an academically weaker group of students to designate as the treatment class. Yet even though the treatment group started out with weaker students and less observable and perceived presence of P-Factors, and therefore less "peaceable treatment" of one another, both evidence of the P-Factors *and* the students' performance rose during the year, often at faster rates than those in the comparison group.

Thus, while the treatment group did not outperform the comparison group in terms of final grades, they *did* outperform the comparison group in *rate of improvement*. There is at least some statistically significant correlation between these effects and the

presence of the TSBP/Conflict Resolution treatment, particularly in the Math class. The whole-school gains in Math MPSPs relative to ELA gains are, in this context, interesting, but there is no statistical basis for crediting either treatment, GRAV or the additional treatment for this jump.

If the treatment indeed yielded benefits here, the immediate question is why in Math and not in ELA? The teacher might be the key factor: perhaps something about Mr. Harris' style and interpretation of the treatment activities was more effective than that of Ms. Sommers. Although student gender and race were not found to have any significant correlations with other data,[20] perhaps the *teacher's* gender played a role, and students felt safer in the presence of a male classroom leader. Another explanation might lie in the nature of the academic subjects themselves: Math at the middle school level tends to be very well-defined, in that "right answers" are available, while class discussions of literature tend to be more amorphous and open to interpretation. Perhaps a climate of safety is more important in a Math classroom, where the stakes are higher because a student can be "wrong" more easily, and thus a safer classroom leads to more risk-taking and higher achievement. My study did not seek to examine, through literature review or explicit data collection, any of these avenues, but a successor study might wish to.

That Mr. Harris' classroom scored slightly higher on the RTOP may also be no coincidence. Recall from Chapter 2.0: Review of the Literature, that the theory of the P-Factors is grounded in the presence of constructivist classroom methodology. While it is possible that such climactic factors might still be of benefit in a more authoritarian or behaviorist-focused school, the theory would need significant modifications to be adapted

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[20] Given existing research on male/female and black/white achievement gaps, the lack of such evidence in my study likely owes more to its small n. A larger study might well reveal such differences.

to such environments. In short, there might still be some correlation between safety and learning *anywhere*, but it would seem strongest when students are constructing and negotiating ideas and understandings. Had the treatment classrooms in both subject areas been more constructivist, according to the theory, then it is likely that the treatment would have been more effective in increasing achievement.

It may seem ironic that I, a researcher so focused on mutually negotiated learning environments, grew so frustrated with teachers who did not "follow my orders." While detrimental to the study's integrity, the decisions of the teachers to alter the terms of the study is in itself worthy of discussion. As a teacher myself, I can certainly empathize with authors like Dillon (2005), who report that teachers are "weary of every new wave of reform after being subjected to hundreds of contradictory findings and approaches in a career." Both teachers in this study made repeated statements attesting to their level of stress and perception of being overworked and under-supported. The facts on the ground are that no new program or reform of any kind, regardless of its potential, will work without the negotiated cooperation of school faculty. Perhaps if I had engaged in dialogue with the teachers and co-constructed a study that would have been more workable for them (and if I had had the resources to help create those conditions), their cooperation would have increased and the study would have gone according to plan. Attempting to address students' learning conditions without addressing teachers' working conditions seems an enterprise doomed to failure.

In conclusion, this study offers, at best, preliminary evidence to indicate that, in Math classes at the eighth grade level, peaceable schools programs may have some positive effect on some of the weaker students in a class. But if even such a flawed and

imperfect study as this yielded glimmers of significant effect, then there is a call to attempt such a study with the resources and scope that it deserves.

That this study's most reliable evidence suggests gains for the lowest performing students is of particular interest, not only from a moral/ideological standpoint, but also from a practical one: under No Child Left Behind, schools are judged by the state based on their ability to make AYP (Annual Yearly Progress), and gains in the attainment of the weakest students have the strongest effect on AYP numbers.

It is my hope that this potential link may motivate further study, especially given how so few studies have been conducted on the effects of peaceable environments on student achievement. With the new Obama Administration attempting, at least in its rhetoric, to shift away from adversarialism and incorporate more cooperative approaches to everything from domestic lawmaking to foreign policy, it stands to reason that such approaches should be investigated and evaluated in the field of education as well. We owe it to our nation's children, and their teachers, to see if two of the biggest challenges schools face, reducing violence and increasing student achievement, could both be met by the same measure.

Hopefully this study will help open the door towards a further examination of the correlations between peace education, and simply *good* education, that helps students acquire and develop the knowledge and skills they need to manage their future jobs, communities and relationships. We need a next generation that is highly educated to turn the wheels of our information-based society, and we also need a next generation that can develop alternatives to violence as a means of addressing conflicts.

Our current national and world climate is one that suffers from a pervasive fear of violence, both domestic and foreign based. We are engaged for the first time in sixty years in two simultaneous wars (Iraq and Afghanistan), which themselves are constructed by our political leadership as part of a "global war" with no foreseeable end. Since 2001 nearly a trillion dollars has been funneled to the wars in Afghanistan and Iraq alone,[21] a figure that does not even account for funds spent on domestic policing in response to rises in violent crimes at home, all with results that are unclear at best (absent the kind of demand for research-based accountability that for the past 20 years has been levied at public education). Our society will not be able to sustain itself either economically or spiritually if we do not actively and consciously seek to develop alternative ways of dealing with conflicts other than just through violence. By calling attention to best educational practices that simultaneously build the skills for more cooperative, peaceable relations at home and abroad, we can attempt to equip subsequent generations with the tools to carry out a conscious mission of making our country and world a more peaceful place.

It is undeniable that beneath its pragmatic mission to prepare students with job skills, the roots of public education lie in utopian visions. Even before Mann and Dewy, the early 17th century Czech teacher and philosopher, Comenius, envisioned education as a means to bring peace in the midst of the wars of the Reformation (Stokes, 2007). It is time to revive Comenius' vision of education as a peacemaking force, for the benefit of our society and our world in the large scale, and in the more immediate scale, our students' improved learning of their academic subjects.

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[21] As of September 2009, the US has spent $908,000,000,000 on the Iraq and Afghanistan Wars (National Priorities Project, 2009)

APPENDIX A: Instruments

P- FACTOR Observable SCC
(Safety, Cooperation and Connection) SCALE

The purpose of this instrument is to measure the extent to which certain indicators of safety, cooperation and connection beyond the classroom are or are not present in a given classroom climate.

Part One:

This part of the instrument relies on data collected through the observer's assessment of the physical space in which students learn. Make a cursory observation of the classroom and its immediate surroundings (halls, lockers, bathrooms if appropriate), then assign each of the following standards a rating of 1 (very poor condition) to 5 (excellent condition). If you are not able to assess a given standard, please give it a rating of 0.

State of repair of desks and chairs	State of repair of walls	Cleanliness of floors	Absence of graffiti	Absence of harmful smells
Absence of loud/distracting noise (not generated by the students or teacher)	State of repair of windows	Cleanliness of bathrooms	Well-stocked and supplied nature of bathrooms	Proper containment of trash and/or potentially harmful substances

Space for comments and miscellaneous observations related to the safety and upkeep of the physical space:

Part Two:

The purpose of this observation instrument is to measure the extent to which classroom climate indicators—also called "items"—may or may not be present in each 15-minute observation segment.

After 15 minutes of observation, assign a rating of 1 (not evident) to 7 (highly evident and consistent) for each item below. To select a rating, first move to the ODD NUMBER that most closely reflects how evident and pervasive an item is. If that number does not precisely reflect the level of evidence observed, then move down or up to the adjacent even number that more accurately reflects the item's level of presence within an activity. Note that each item/indicator may not be present/applicable in each observation; therefore a rating of "1" is not necessarily negative.

The "5" rating is also used in cases where the exemplar's presence is implicit within the activity. For instance, if youth are generally friendly to each other throughout the observation, but most do not go beyond the casual, friendly interaction, the rating would be a "5."

-----1-----	-----2-----	-----3-----	-----4-----	-----5-----	-----6-----	-----7-----
Exemplar is not evident		Exemplar is rarely evident		Exemplar is either moderately evident, or implicit (students are refraining from the negative behaviors)		Exemplar is highly evident and consistent Students are not just refraining from negative behaviors but actively exhibiting socially promotive behaviors

SAFETY AND SECURITY All or most students:	COOPERATION: All or most students:
Are friendly and relaxed with one another. Students socialize informally. They are relaxed in their interactions with one another. They appear to enjoy one another's company.	**Assist one another.** One or more students formally or informally reach out to help/mentor peers and aid them in thinking about/figuring out how to complete a task. A high score in this item refers to assistance that is intentional and prolonged, going beyond answering an incidental question or lending someone a pen (such actions alone cannot constitute more than a 4).
Respect one another's right to work. Students refrain from causing disruptions that interfere with others accomplishing their own tasks. They take actions that actively facilitate the work of others.	**Are collaborative**. Students work together and share materials to accomplish tasks. This item is different than the one above it; as in collaboration, students are equal or equitable partners in the work (as opposed to a mentor tutoring someone). This item can include working together on assigned teams if most or all students on the team are actually working together (as opposed to doing parallel work while placed in a group).
Respect one another's opinions. When working together, students consider one another's viewpoints. Students may disagree, but do not denigrate or ridicule others' opinions. They do not say "shut up" or take other non-physical action to silence another student. They express supportive words & offer assurances and other positive feedback.	**Work with true interdependence.** In collaborative work, every student in a group seems to have a role which: 1) contributes meaningfully to the success of the task 2) has individual accountability
Respect one another's feelings. Students refrain from derogatory comments/actions about the individual person. They do not use put-downs/name-calling, *even if it seems joking*. They do not say "shut up" or take other any non-physical action to silence another student. Students offer positive words of feedback & encouraging language.	**Listen actively and attentively to peers.** Students respond to other students in a way that indicates they have actually listened to what their peers have said (such as making specific references to something a classmate has said, asking follow-up questions, etc). They appear interested in what others have to say (attentive posture and eye-gaze, supportive nods), and provide concrete and constructive feedback about ideas or actions.

	Respect one another's person. Students do not take physically threatening postures such as faking punches, leaps or tackles, or getting "up in someone's face." Students do not physically strike other students (push, shove, punch, kick), *even if it seems to be jokingly.*	**Contribute opinions, ideas and/or concerns to discussions.** Students discuss and express their ideas and respond to questions from the teacher and their peers, or even spontaneously share connections they have made. This item goes beyond basic Q&A, and indicates that such sharing of ideas is part of the activity and within the class norms. Calling out or disruptively talking out of turn is *not* a part of this item.
	Respect one another's sexual rights. Students do not make specifically lewd or sexually inappropriate remarks or take physical actions that could constitute harassment or unwanted advances. Students do not take on sexual postures, mimic sexual acts or noises for the purpose of teasing or making advances. Students express respect for sexual differences and outrage at violation of that respect.	**Maintain community norms without constant teacher intervention.** Students exhibit all of the above behaviors without the need for explicit reminders from the teacher. This goes beyond just knowing a classroom's routines. it means that students help one another, engage in interdependent collaboration, etc. without teacher prompting.

SAFETY AND SECURITY All or most students:		**COOPERATION:** All or most students:	
	Respect the process of negotiation. If disagreements occur, they are handled constructively.		
	Show positive affect towards and respect for the teacher. Students interact with the teacher, and these interactions are generally friendly and non-hostile. Students do not interrupt, yell at, or denigrate the teacher, or refuse to comply with the teacher's instructions or requests.		

CONNECTIONS BEYOND THE CLASSROOM: All or most students		
	See the relevance of the material to other subjects. Students, either spontaneously or guided by the teacher, make connections between the work or concepts from this class and the work or concepts from other classes. E.g., connecting a passage from *To Kill A Mockingbird* to the study of Segregation in their History class, or connecting Social Darwinism in their history class to Natural Selection in their biology class.	**See the relevance of the material to the "real world."** Students, either spontaneously or guided by the teacher, make connections between the work or concepts from this class and the "real world," defined as anything beyond the school community (their family or home community, national or world events, etc). E.g., applying a physics lesson to their own driving habits, applying a history or English lesson to current events or events in their own family life, etc.

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The P-Factor SCC (Safety, Cooperation and Connections) Survey

Student Questionnaire

We want to hear about the things at school that make you feel safe and unsafe.
Please answer these questions by marking the number that goes with your answer.
Please mark only one number for each statement or question.

This survey is anonymous – no one will associate your name with these answers.

This survey has no effect on your school grades.

Part One: How often do these things happen at your school? Often	1=Not at all	2=Once in awhile	3=Sometimes	4=Often	5=Very
1. Students using drugs (marijuana, coke, crack, ecstasy) during school hours	1	2	3	4	5
2. Students destroying things (vandalism)	1	2	3	4	5
3. Students drinking beer/wine/liquor during school hours.	1	2	3	4	5
4. Students getting into fights	1	2	3	4	5
5. Students stealing things	1	2	3	4	5
6. Students threatening or bullying	1	2	3	4	5
7. Students carrying weapons	1	2	3	4	5

Part Two: This section asks about what your school is like. When you answer, think about the way your school is most of the time. Use the five choices below. Circle the answer that you think fits best for you.

	1=Strongly disagree	2=Disagree	3=Agree some and disagree some	4=Agree	5=Strongly agree
8. I feel very safe at this school	1	2	3	4	5
9. They take good care of the school building & grounds	1	2	3	4	5
10. The school is being ruined by gang activity	1	2	3	4	5
11. Most teachers here are nice people	1	2	3	4	5
13. I always think before I act	1	2	3	4	5
14. This school is badly affected by crime and violence in the community	1	2	3	4	5
15. Most of my teachers respect me	1	2	3	4	5
16. When students break the rules, they are treated firmly but fairly	1	2	3	4	5
17. I tell the truth every single time	1	2	3	4	5

	1=Strongly disagree	2=Disagree	3=Agree some and disagree some	4=Agree	5=Strongly agree
18. Gang members make this school dangerous	1	2	3	4	5
19. They keep the school area well maintained and clean	1	2	3	4	5
20. Most of my teachers are fair	1	2	3	4	5
21. At this school, the students are really motivated to learn	1	2	3	4	5
22. Crime and violence are major concerns at this school	1	2	3	4	5
23. At this school, students and teachers really care for each other	1	2	3	4	5
24. The rules at my school are fair	1	2	3	4	5
25. I do not feel safe at this school	1	2	3	4	5
26. I learn a lot about myself at this school	1	2	3	4	5

Part Three: This section asks about things that have recently happened to you at school. Please answer by circling "yes" or "no" for each item that has happened to you at school in the past month. We mean things that have actually happened to you, not things that you have just heard about.

Have any of these things happened _to you_ when you were _at school_ during the _past month_?

27. You were grabbed or shoved by someone being mean	27.	NO	YI
28. You were punched or kicked by someone trying to hurt you	28.	NO	YI
29. You personally saw another student with a gun at school	29.	NO	YI
30. You took ten field trips	30.	NO	YI
31. You had personal property stolen	31.	NO	YI
32. You personally saw another student at school with a knife or razor	32.	NO	YI
33. Another student threatened to hurt you	33.	NO	YI
34. You were voted student of the week four times	34.	NO	YI
35. Someone yelled bad words or cursed at you	35.	NO	YI
36. You were threatened by a student with a gun and you saw the gun	36.	NO	YI
37. Someone made unwanted physical or sexual comments or gestures toward you	37.	NO	YI
38. Someone sexually harassed you	38.	NO	YI

39. You were threatened by a student with a knife and you saw the knife   **39.**   **NO**   **YI**

40. Someone tried to scare you by the way they looked at you   **40.**   **NO**   **YI**

41. Someone made fun of you, dissed you or put you down   **41.**   **NO**   **YI**

42. You said something in class that someone made fun of[22]   **42.**   **NO**   **YE**

43. You wanted to say something in class but didn't because you were afraid someone would make   **43.**   **NO**   **YE**
fun of you

Part Four: This section is about teasing. We are interested in learning about why students are teased. Each question lists a certain thing and wants to know how much you are teased about it by other students, and how much this teasing bothers you.

Please circle the number under each heading that best fits *YOU*.

I AM TEASED ABOUT	HOW MUCH? 1=Never 2=Sometimes 3=Often 4=A lot				IT BOTHERS ME HOW MUCH? 1=Never 2=Sometimes 3=Often 4=A lot			
44. The way I dress	1	2	3	4	1	2	3	4
45. How rich or poor I am	1	2	3	4	1	2	3	4
46. How smart I am	1	2	3	4	1	2	3	4
47. My grades	1	2	3	4	1	2	3	4
48. Talking too much	1	2	3	4	1	2	3	4
49. My friends	1	2	3	4	1	2	3	4
50. The way I look	1	2	3	4	1	2	3	4
51. The way I act	1	2	3	4	1	2	3	4
52. The brand of shoes I wear	1	2	3	4	1	2	3	4
53. Who I live with	1	2	3	4	1	2	3	4
54. My body shape	1	2	3	4	1	2	3	4
55. Acting weird	1	2	3	4	1	2	3	4
56. Not knowing the answers in class	1	2	3	4	1	2	3	4
57. How I talk	1	2	3	4	1	2	3	4
58. Getting into trouble	1	2	3	4	1	2	3	4
59. Acting "gay"	1	2	3	4	1	2	3	4
60. My jewelry/chains	1	2	3	4	1	2	3	4
61. Something I said in	1	2	3	4	1	2	3	4

---

[22]   Questions #42 and #43 were the two that I created and added

class

	1	2	3	4	1	2	3	4
62. Not being good at sports	1	2	3	4	1	2	3	4
63. What my family is like	1	2	3	4	1	2	3	4
64. Being a "nerd"	1	2	3	4	1	2	3	4
65. My weight	1	2	3	4	1	2	3	4
66. Being "chicken" or scared	1	2	3	4	1	2	3	4
67. How I do in school	1	2	3	4	1	2	3	4
68. Not being "popular"	1	2	3	4	1	2	3	4
69. My "stuff"	1	2	3	4	1	2	3	4
70. Being a "dork" or a "loser"	1	2	3	4	1	2	3	4
71. My schoolwork	1	2	3	4	1	2	3	4
72. My parents	1	2	3	4	1	2	3	4
73. The music I like/listen to	1	2	3	4	1	2	3	4
74. Having "weird" or different friends	1	2	3	4	1	2	3	4
75. Sports I do or do not participate in	1	2	3	4	1	2	3	4

76. Of the classes you are in, which class (please name the class and the teacher) do you get teased the <u>most </u>in?

_____

77. Of the classes you are in, which class (please name the class and the teacher) do you get teased the <u>least </u>in?

78. How would you rate Ms. X's class in terms of how much kids tease you? Below, please circle the answer that best matches.

Less than most other classes   About the same as most other classes   More than other classes

79. How would you rate Ms. X's class in terms of how much other kids get teased? Below, please circle the answer that best matches.

Less than most other classes   About the same as most other classes   More than other classes

Please circle the number which best answers how much you agree with each statement about Ms. X's class.

	1=Strongly disagree	2=Disagree	3=Agree some	4=Agree	5=Strongly agree
80. Other students in this class want me to do my best schoolwork.	1	2	3	4	5
81. My best friends are in this class	1	2	3	4	5
82. I am not doing as well as I would like to	1	2	3	4	5
83. I find it hard to speak my thoughts clearly in class	1	2	3	4	5
84. In this class students like to help me learn	1	2	3	4	5
85. Schoolwork is fairly easy for me	1	2	3	4	5
86. Other students in this class think it is important to be my friend	1	2	3	4	5
87. When we work together in small groups we try to make sure that everyone in the group learns the assigned material	1	2	3	4	5
88. I do schoolwork to make my teacher happy	1	2	3	4	5
89. I like to work with others in this class	1	2	3	4	5
90. I should g*et al*ong with other students better than I do	1	2	3	4	5
91. I do schoolwork because my classmates expect it of me	1	2	3	4	5
92. My teacher really cares about me	1	2	3	4	5
93. In this class I like to help other students learn	1	2	3	4	5
94. In this class I try to share my ideas and	1	2	3	4	5

materials with other students when I think it will help them.

95. When we work together in small groups, I have to find out what everyone else knows if I am going to be able to do the assignment.	**1**	**2**	**3**	**4**	**5**
96. In this class it is a good idea for students to help each other learn.	**1**	**2**	**3**	**4**	**5**
97. In this class I like to cooperate with other students.	**1**	**2**	**3**	**4**	**5**
98. In this class students learn a lot of important things from each other.	**1**	**2**	**3**	**4**	**5**
99. In this class students feel able to say what they want without being afraid of anyone making fun of them or putting them down.	**1**	**2**	**3**	**4**	**5**
100. The things we learn in this class seem like they will help us in the real world – we are learning about real things that are important outside school as well as inside school.	**1**	**2**	**3**	**4**	**5**

You're almost done! We're just going to ask you a few questions about yourself.

Please answer honestly and circle the response that matches your life. Once again, don't worry, all of this is confidential.

101. How many __CLOSE FRIENDS__ do you have at your school?

1. None   2. One student   3. Two students   4. Three students   5. Four or more students

102. At your school, how many __TEACHERS__ and __OTHER ADULTS__ (principal, counselor, nurse, etc.) can you talk to about problems you might have?

1. None   2. One adult   3. Two adults   4. Three adults   5. Four or more adults

103. In general, what are your grades this school year?

1. Mostly A grades   2. Mostly B grades   3. Mostly C grades 4. Mostly D grades   5. Mostly F grades

104. Who is at home when you get home from school in the afternoon?

1. No one 2. Father or mother   3. Friends   4. Brother or sister 5. Other relative or relatives

105. How do you feel about going to school?

1. I like school very much   2. I like school   3. School is ok   4. I don't like school   5. I hate school

106. How would you describe yourself?

1. **White, Caucasian, or European-American**
2. **Black, African-American**
3. **Latino(a), Chicano(a), Mexican or Hispanic**
4. **Native American (American Indian)**
5. **Asian-American (Japanese, Chinese, Filipino, Vietnamese, Laotian, Pacific Islander)**
6. **Multi-ethnic or Multi-racial**

7. **Other:**_____

107. What is the highest grade that your father/stepfather/male guardian has completed? Mark only one answer, please.

1. **I do not know**
2. **He did not finish high school**
3. **He finished high school**
4. **He took some college or trade school**
5. **He finished college**
6. **He earned a Master's or Doctoral Degree**

108. What is the highest grade that your mother/stepmother/female guardian has completed? Mark only one answer, please.

1. **I do not know**
2. **She did not finish high school**
3. **She finished high school**
4. **She took some college or trade school**
5. **She finished college**
6. **She earned a Master's or Doctoral Degree**

109. Please describe what you like best about your school. You can write on a separate page if you need to.

110. Please describe positive ways your school could improve. You can write on a separate page if you need to.

That's it! You're done! Thank you so much for taking this survey -- you have really helped us out. We hope the results of this research will help us to improve your school and other schools across the state, and we couldn't do that without your input!

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Interview Questions:

1. What are the parts of school that you enjoy the most, and why?

2. What are the parts of school that you enjoy the least, and why?

3. What are the things about your school that make you feel safe? Why?

4. What are the things about your school that make you feel unsafe? Why?

5. In terms of safety, has [X's] class been different from other classes you have taken/taught? If so, please describe those differences.

6. (If applicable) What do you think are the reasons for those differences?

7. Do you feel able to say what you want to say in [X's] class without fear of being teased or made fun of by other students? Why or why not?

8. What do you enjoy about group work? (times when the teacher requires you to work on assignments with other students) Why?

9. What do you not enjoy about group work? Why?

10. In terms of group work, has [X's] class been different from other classes you have taken/taught? If so, please describe those differences.

11. (If applicable) What do you think are the reasons for those differences?

12. What about what you learn in [X's] class seems like It might help you in your other classes? Explain in detail.

13. Compared to previous [English/Math] classes you have taken, does [X's] class seem to have more "stuff" that might be helpful in your other classes?

14. What about what you learn in [X's] class seems relevant to the real world? (*you may have to explain the meaning of the world "relevant"*) Why?

15. In terms of relevance to the real world, has [X's] class been different from other classes you have taken/taught? If so, please describe those differences.

16. (If applicable) What do you think are the reasons for those differences?

17. Based on what you know, do you think there are good, effective ways to solve conflicts without using violence? Please explain in detail why you answered the way you did.

18. Do you feel you are learning more in [X's] class than in other classes? Why or why not?

FLORIDA TAXONOMY OF COGNITIVE BEHAVIOR

When the observer sees students engaging in an activity or demonstrating a skill/ability that offers evidence of a certain behavior on this taxonomy, he makes a mark by that listed behavior.

1.1 Knowledge of Specifics

1. Reads
2. Spells
3. Identifies something by name
4. Defines meaning of a term
5. Gives a specific fact
6. Tells about an event

1.2 Knowledge of ways and means of dealing with specifics

7. Recognizes symbol
8. Cites a rule
9. Gives chronological sequence
10. Gives steps of process, describes method
11. Cites trend
12. Names classification system or standard
13. Names what fits given class. system or standard

1.3 Knowledge of universals and abstracts

14. States generalized concept or idea
15. States a principle, law, or theory
16. Tells about organization or structure
17. Recalls name of principle, law, or theory

2.0 Translation

18. Restates in own words or briefer terms
19. Gives concrete examples of an abstract idea
20. Verbalizes from a graphic representation
21. Translates verbalization into graphic form
22. Translates fig. statements into lit. statements
23. Translates foreign lang. into Eng. or vice versa

3.0 Interpretation

24. Gives reason (tells why)
25. Shows similarities and differences
26. Summarizes or conc. from obs. of evidence
27. Shows cause and effect relationship
28. Gives analogy, simile, metaphor
29. Performs a directed task or process

4.0 Application

30. Applies previous learning to new situations
31. Applies principle to new situation
32. Applies abstract know. in a practical situation
33. Identifies, selects, and carries out a process

5.0 Analysis

34. Distinguishes fact from opinion
35. Distinguishes fact from hypothesis
36. Distinguishes conc. from supporting statements
37. Points out unstated assumption
38. Shows interaction or relation of elements
39. Points out particulars to justify conclusions
40. Checks hypotheses with given information
41. Distinguishes relevant from irrelevant statements
42. Detects error in thinking
43. Infers purpose, point of view, thoughts, feelings
44. Recognizes bias or propaganda

6.0 Synthesis (Create)

45. Reorganizes ideas, materials, processes
46. Produces unique communication, divergent idea
47. Produces a plan, proposed set of operations
48. Designs an apparatus
49. Designs a structure
50. Devises a scheme for classifying information
51. Formulates hypotheses, intelligent guesses
52. Makes deductions from abstract symbols, prop.
53. Draws inductive generalization from specifics

7.0 Evaluation

54. Evaluates something from evidence
55. Evaluates something from criteria

RTOP - Reformed Teaching Observation Protocol (Piburn & Swada, 2000)

LESSON DESIGN AND IMPLEMENTATION

1) The instructional strategies and activities respected students' prior knowledge and the preconceptions inherent therein.

2) The lesson was designed to engage students as members of a learning community.

3) In this lesson, student exploration preceded formal presentation.

4) The lesson encouraged students to seek and value alternative modes of investigation or problem solving.

5) The focus and direction of the lesson was often determined by ideas originating with students.

CONTENT

Propositional Knowledge

6) The lesson involved fundamental concepts of the subject.

7) The lesson promoted strongly coherent conceptual understanding.

8) The instructor had a solid grasp of the subject matter content inherent in the lesson.

9) Elements of abstraction (i.e., symbolic representations, theory building) were encouraged when it was important to do so.

10) Connections with other content disciplines and/or real world phenomena were explored and valued.

Procedural Knowledge

11) Students used a variety of means (models, drawings, graphs, concrete materials, manipulatives, etc.) to represent phenomena.

12) Students made predictions, estimations and/or hypotheses and devised means for testing them.

13) Students were actively engaged in thought-provoking activity that often involved critical assessment of procedures.

14) Students were reflective about their learning.

15) Intellectual rigor, constructive criticism, and the challenging of ideas were valued.

CLASSROOM CULTURE

Communicative Interactions

16) Students were involved in the communication of their ideas to others using a variety of means and media.

17) The instructor's questions triggered divergent modes of thinking.

18) There was a high proportion of student talk and a significant amount of it occurred between and among students.

19) Student questions and comments often determined the focus and direction of classroom discourse.

20) There was a climate of respect for what others had to say

Student/Instructor Relationships

21) Active participation of students was encouraged and valued.

22) Students were encouraged to generate conjectures, alternative solution strategies, and ways of interpreting evidence.

23) In general, the instructor was patient with students.

24) The instructor acted as a resource person, working to support and enhance student investigations.

25) The metaphor "instructor as listener" was very characteristic of this classroom.

_____

APPENDIX B: Key Regression Data

a. Predictors: (Constant), Treatment Group	
b. Dependent Variable: % change in MPSP Math over the year	

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.263	1	1.263	4.536	.041[a]
	Residual	8.909	32	.278		
	Total	10.171	33			

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.263	1	1.263	4.536	.041[a]
	Residual	8.909	32	.278		
	Total	10.171	33			
a. Predictors: (Constant), Red - Treatment?						
b. Dependent Variable: % change in MPSP Math over the year						

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.332	.136		2.434	.021
	Red - Treatment?	.388	.182	.352	2.130	.041
a. Dependent Variable: % change in MPSP Math over the year						

MANOVA: Tests of Between-Subjects Effects: Math MPSP gains from Test#2-Test#3 + Year of attendance:

Dependent Variable:V13

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.239[a]	1	.239	7.492	.007
Intercept	.632	1	.632	19.797	.000
V3	.239	1	.239	7.492	.007
Error	10.380	325	.032		
Total	11.098	327			
Corrected Total	10.620	326			

a. R Squared = .023 (Adjusted R Squared = .020)

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.889	1	.889	4.188	.050[a]
	Residual	6.157	29	.212		
	Total	7.046	30			

a. Predictors: (Constant), Red - Treatment?

b. Dependent Variable: change Test4 to Test5

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.314	.128		2.454	.020
	Red - Treatment?	-.343	.168	-.355	-2.047	.050

a. Dependent Variable: change Test4 to Test5

Tests of Between-Subjects Effects

Dependent Variable:ELA Grade Q1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	304.850[a]	1	304.850	3.329	.077
Intercept	218068.850	1	218068.850	2381.199	.000
RedTreatment	304.850	1	304.850	3.329	.077
Error	3022.122	33	91.579		
Total	221604.000	35			
Corrected Total	3326.971	34			

a. R Squared = .092 (Adjusted R Squared = .064)

Tests of Between-Subjects Effects

Dependent Variable:ELA Grade Q3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	315.090[a]	1	315.090	6.980	.013
Intercept	249843.090	1	249843.090	5534.941	.000
RedTreatment	315.090	1	315.090	6.980	.013
Error	1489.595	33	45.139		
Total	251967.000	35			
Corrected Total	1804.686	34			

a. R Squared = .175 (Adjusted R Squared = .150)

Tests of Between-Subjects Effects

Dependent Variable:Change test4-test5

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1.136[a]	1	1.136	5.956	.020
Intercept	1.032	1	1.032	5.409	.026
RedTreatment	1.136	1	1.136	5.956	.020
Error	6.487	34	.191		
Total	8.541	36			
Corrected Total	7.623	35			

a. R Squared = .149 (Adjusted R Squared = .124)

Tests of Between-Subjects Effects

Dependent Variable:change test4 to test5

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.889[a]	1	.889	4.188	.050
Intercept	.609	1	.609	2.870	.101
RedTreatment	.889	1	.889	4.188	.050
Error	6.157	29	.212		
Total	7.451	31			
Corrected Total	7.046	30			

a. R Squared = .126 (Adjusted R Squared = .096)

Tests of Between-Subjects Effects

Dependent Variable:ELA Grade Q4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	407.008[a]	1	407.008	6.867	.013
Intercept	258543.008	1	258543.008	4362.003	.000
RedTreatment	407.008	1	407.008	6.867	.013
Error	1955.964	33	59.272		

Total	261051.000	35			
Corrected Total	2362.971	34			

a. R Squared = .172 (Adjusted R Squared = .147)

APPENDIX C: The Necessity of the Formal Study of Peace and Nonviolence in Schools

Although few teachers or administrators would consciously identify their schools as promoting "Violence Studies," the facts speak for themselves. Numerous studies report 75 percent to 90 percent of classroom instruction, particularly in History and Social Studies classes, is organized around textbooks (Tyson & Woodward, 1989). James Loewen's *Lies My Teacher Told Me: Everything Your History Textbook Gets Wrong* won the 1996 American Book Award for its critique of twelve popular American history textbooks. He alleges that history texts present wars in American history in such a non-nuanced manner that they

> …offer no way to understand any problem- such as the Vietnam War, [taught without addressing] poverty, inequality, international haves and have-nots, environmental degradation, or changing sex roles-that has historical roots. Therefore we might expect that the more traditional schooling in history that Americans have, the less they will understand Vietnam or any other historically based problem. This is why educated people were more hawkish on the Vietnam War. (Loewen, 1996, p. 306)

Students at high-performing schools with high college acceptance rates and top scores on standardized tests could fit Loewen's picture of that educated group were made hawkish precisely by their education. A popular textbook[ii], Holt, Rinehart and Winston's *The American Nation*, is not one of the books Loewen reviews, but a cursory look at its chapter headings reveal that of 27 chapters, eight of them (30%) are about wars, postwars, or interims between wars. The chapter "America and the World, 1898-1917" focuses exclusively on imperial conquests and military tensions. In terms of sheer weight of pages, 156 pages are devoted to wars; by comparison, the entire 100-year American civil rights movement is condensed to six pages of coverage, under the heading "Voices

of Dissent" that also includes what the textbook calls "the rock rebellion" of Elvis Presley and Ritchie Valens. The US labor movement, home to some of the most successfully waged nonviolent conflict in world history, receives only three pages of coverage, coverage which mostly focuses on violent events like the Haymarket riot and anarchist bombings. Protest against the Vietnam war receives a comparatively robust eight and a half pages but is parsed under the heading "Protest vs. Loyalty," potentially setting up an artificial dichotomy between the two (many of the protestors in fact believed they were being more loyal to the ideals of America than supporters of the Vietnam War), and no mention at all is made of the widespread antiwar movement, underground press, and refusals-to-deploy among the American troops.[iii] No mention whatsoever is made of the active antiwar movements and draft refusals in both World Wars or the Civil War. To its credit, *The American Nation* does include 22 pages on human rights and 27 pages on the environment—both at the very back of the book, where history courses seldom reach when pursuing a chronological approach.

In an age of increasing pressure to prepare students for standardized exams, teachers may find little time to supplement this kind of traditional education, assuming their own education has supplied them with the knowledge to do so. Social Studies teachers may possess impressive knowledge of the Imperial Wars of Greece and Rome, but at the suggestion that they include lessons on Ashoka's nonviolent empire, or the nonviolent aspects of South Africa's antiapartheid struggle, or Prague Spring or the Velvet Revolution in Czechoslovakia, or the Solidarity Movement in Poland, or the Mothers' Crusade in Argentina, they may well reply that they do not feel qualified to teach such lessons, having learned little to nothing about them in their own education. Furthermore, they perceive that they have no time in which to add them to their curriculum, anyway.

This perception may not be valid. At least some of the time spent meticulously covering the various battles of the American Civil War, for example, could be diverted

to the Quaker antislavery movement that ended the American slave trade in the early nineteenth century, or a comparison and contrast with William Wilberforce's abolitionist policies in England that accomplished what generations of American presidents, Lincoln included, could not—emancipation that was not built upon the corpses of millions of human beings killed by the Civil War.

In seeking a history education outside of formal schooling, students find a picture of the course of human events that is even more focused on war: on a given day (March 21, 2007), cable TV's *The History Channel* offered 21.5 hours of non-infomercial programming, 15 hours (70%) of which was focused on wars and violence, with such titles as "Man, Moment, Machine: Saddam Hussein & The Nerve Gas Atrocity," "Mail Call: MP5/WWII Marine Corps Paratroopers/Pilot Headgear: #54," "Warrior Queen Boudica," "Super Tools: Aircraft Carriers," and a special on Leonardo Da Vinci that focused exclusively on his early designs for handguns. To the producers of *The History Channel*, history and "history of violence" seem synonymous. It may come as little surprise that advertising banners for the US Army pepper the History Channel's web pages.

It may also come as little surprise that, since the armed forces work hand in hand not only with entertainment media but also with public schooling, war-focused curriculum is the order of the day. Junior Reserve Officers' Training Corps (JROTC) has been implemented in high schools since the National Defense Act of 1916 and was later expanded under the 1964 ROTC Vitalization Act (Wikipedia, "JROTC," 2007). The Army is remarkably forthright about the fact that these programs, while not an official recruitment drive, are nevertheless designed to "help motivate young Americans toward military service" (US Army, 2001). The No Child Left Behind Act of 2001 officially incorporated schools as a recruitment source, mandating that schools "shall provide, on a

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request made by military recruiters or an institution of higher education, access to secondary school students' names, addresses, and telephone listings" (US Dept of Education, 2001) unless a parent actively takes steps to remove his or her child from this process. In practice, this "opting out" clause is seldom even utilized, for a variety of reasons, mainly because school districts do a poor job of informing parents of the recruitment clause or of their rights to oppose it, to the point where several districts have been sued over alleged obstruction of the parental notification process (Sonnenfeld, 2005). In short, schools have traditionally operated and continue to operate in conjunction with the military, which at minimum, instills a normative quality to a military worldview even if it does not result in tampering with the curriculum.

Fit into the broader context of the ways in which media educates and informs the American public, this worldview only strengthens. A shortly post-9/11 survey of 1,000 US consumers by MediaComPulse, a monthly media trends research report released by MediaCom Future Group, reported that 70 percent of Americans polled listed themselves as "more likely to pay attention to the media throughout the day," a figure which dropped down to 52 percent a year later (MediaCom, 2002). What "united" America in the wake of the World Trade Center was not only a sense of increased patriotism, but also increased participation in the collective reality constructed by the media, a reality which painted war as a necessary and desired response to the attacks. Frequently absent is any history of how the United States' military policy in arming the forerunners of Al Qaeda in their 1980s campaign against the Russians, or American military operations on Saudi soil during the first Gulf War played a role in sparking those attacks.

Indeed the media's sway over the American sense of history was made evident in Orwellian fashion when the public produced "overwhelming support for war in Afghanistan" for that nation's alleged culpability in the 9/11 attacks (Newport, 2001), only to have two-thirds of the public respond to a CBS poll two years later, in a baffling reversal, saying they believed that Iraq was the agency that destroyed the World Trade Center, despite the lack of any hard evidence other than the Bush Administration's insistence, continually repeated by the media, that it was so (CBS, 2002).[iv]

During the early years of the war in Iraq that followed, the news media continued to serve as little more than a cheerleader for the war effort. Through the press's willingness to rely on reporters "embedded" with military units and consenting to the funneling of all war news through military "control rooms" (Noujaim, 2004), only viewers who partook in small-circulation "alternative media" or international sources received anything other than a pro-militaristic picture of events.

FAIR's May/June 2003 analysis of the Iraq War coverage by six major news sources (BBC World News Tonight, CBS Evening News, NBC Nightly News, CNN's Wolf Blitzer Reports, Fox's Special Report with Brit Hume, and PBS's NewsHour with Jim Lehrer) found that:

> Official voices, including current and former government employees, whether civilian or military, dominated network newscasts, accounting for 63 percent of overall sources. Current and former U.S. officials alone provided more than half (52 percent) of all sources; adding officials from Britain, chief ally in the invasion of Iraq, brought the total to 57 percent….of a total of 840 U.S. sources who are current or former government or military officials, only four were identified as holding anti-war opinions. (Rendall, Steven & Broughel, 2003)

In addition:

> Nearly two-thirds of all sources [cited by reporters in their coverage], 64 percent, were pro-war, while 71 percent of U.S. guests favored the war. Anti-war voices were 10 percent of all sources, but just 6 percent of non-Iraqi sources and 3

percent of U.S. sources. Thus viewers were more than six times as likely to see a pro-war source as one who was anti-war; with U.S. guests alone, the ratio increases to 25 to 1.

Few events seemed more emblematic of this trend than trusted CBS Anchor Dan Rather's

April 14th, 2003 appearance on *Larry King Live* where he

> openly declared the partisanship of his coverage [by stating] `Look, I'm an American. I never tried to kid anybody that I'm some internationalist or something. And when my country is at war, I want my country to win, whatever the definition of "win" may be. Now, I can't and don't argue that that is coverage without a prejudice. About that I am prejudiced.

Even at the time of this writing, when news coverage has shifted significantly towards a

tone of pessimism about the Iraq war, such critiques seem almost exclusively a question

of tactics, not a question of whether or not violence itself has failed as policy. For

example, as Solomon (2006) outlines:

> During September, as the Nexis media database attests, the USA's sizeable newspapers and wire services ran articles referring to Iraq as a "quagmire" several times a day. Readers of the *New York Times* have seen such references on an average of once a week this year. Overall, major U.S. media outlets have associated Iraq with the term "quagmire" thousands of times in 2006. Some of those references are from war supporters eager to dispute the notion that "quagmire" is applicable to what's going on in Iraq…But to focus arguments on whether the Iraq war should be called a "quagmire" is to flatten moral issues, transmuting them into matters of strategy and efficacy….if a war is wrong, the wisdom of supporting it shouldn't hinge on whether it's a quagmire or a cakewalk. Criticisms of the war that accuse it of being a "quagmire" can be disputed with lofty calls to persevere—doing the difficult right thing—until conditions on the ground change, the Iraqi government gets stronger and so forth. But opposition to the war that turns on morality cannot be so easily deflected in such ways.

An argument for an increased inclusion and adoption of Peace Studies in schools

does not advocate a mere replacement of this ideological war lens, in formal or informal

education, with an "ideological peace lens," whatever that might mean. However, there

certainly exists a need—compatible with the P Factor of metacognitive criticism—to

widen the spotlight traditionally cast on human history, including movements, thinkers

and events which would by the nature of their inclusion demand that students engage in an ongoing critique of wars. As Loewen (1996) explains:

> …omission of crucial facts and viewpoints limits profoundly the ways in which students come to view history events. Further, through their one-dimensionality textbooks shield students from intellectual encounters with their world that would sharpen their critical abilities. (p. 275)

Peace Education aims to give students that "sharpening" of their critical abilities, a goal which would help them in nearly any academic practice. Loewen goes as far as to say "by [frequently] taking the government's side," curricula based upon traditional textbooks actually *discourage* critical thinking because they "encourage students to conclude that criticism is incompatible with citizenship" (p. 236).

Such criticism of self and community is a part of metacognition and perspective taking, which rank among the P-Factors. Peace Studies, if presented in formal articulation alongside the environmental factors that encourage peaceable spaces, can open up a whole world of connection between peace in the classroom and peace in the world—another P-Factor—even if by doing nothing more than attesting that peace and nonviolence *have*, despite their absence from school curricula, played sizable roles in human events throughout history.

A place does exist where academia enshrines the study of peace and nonviolent conflict resolution. The academic domain of Peace Studies has for 26 years attempted to incorporate alternative views of human affairs and conflict management techniques to students into higher education, and, to a much less formalized extent, to K-12 schooling as well. Peace Studies as a field was recognized by the United States Government in 1984, and the Peace Studies Association, the professional academic body of the U.S. Institute of Peace, was established three years later. Since that time dozens of scholarly journals have been devoted to the field (Bucknell University, 2006).[v] Definitions of Peace Studies vary across institutions and subfields, but all employ an interdisciplinary

approach to study the human history and capability of settling conflicts without the use of violence, as well as studying and constructing societal mechanisms that promote these capabilities (creating an institutionalized "positive peace" as opposed to merely stopping wars, which would constitute what the field calls "negative peace").

Peace Studies, on the whole, views war and large-scale violence not (entirely) as biological and inevitable realities of the human condition, but as (largely) products of social conditioning, which are potentially changeable. Within this philosophy, "because violence often occurs as a result of conflicts related to economic and social inequalities, issues of justice are also considered a key component of the Peace Studies field" (University of North Texas, 2006). Bucknell University's Peace Studies department (2006) considers a "partial list of topics under peace studies" to include: "violence, war, ethnic conflict, conflict management, conflict resolution, peace making, law, human rights, values, justice, environment, racism, sexism, and nonviolence."

Peace Studies claims among its ranks thinkers as diverse across time and space as Plato and Henry David Thoreau, Sigmund Freud, Albert Einstein, Mahatma Mohandas Gandhi, Martin Luther King, Kenneth Waltz, Gene Sharp, Kenneth and Elise Boulding, Vaclav Havel, H.H. the Dalai Lama, Thich Nhat Hanh, Michael Nagler, Thomas Keen, Michael True, Gordon Fellman and Barbara Ehrenreich. Most of these scholars come from the traditions of sociology, psychology and anthropology. They offer varying views on "human nature," some more biologically grounded and others more socially grounded. Nearly all of them present a picture of human beings as biologically destined to be neither warlike nor peaceful, but inherently capable of resolving conflicts in multiple ways. Society, through formal and informal conditioning, influences people's options (both real and perceived) when they encounter conflicts. Although Peace Studies scholars see conflict as inevitable, they do not see violent, organized conflict as an unalterable facet of human nature. They apply their theories on a multitude of levels: person-to-person, person to group, group-to-group, culture to culture. Nonviolence

theorists in particular (the distinction will be explored shortly) posit that even in asymmetrical conflicts between a powerful group bent on violence and a group with less institutional power determined to use nonviolence, the second group still has opportunities to resolve the situation to their advantage.

Much of Peace Studies theory not only explores the possibilities of peaceful conflict resolution and the exertion of power through nonviolent means, but also critiques war as an effective means of resolving conflicts. These theorists critique the failure of all sorts of violent revolutions, of wars fought for all manner of reasons, from Hitler's inability to conquer Europe through violence, to the NATO bombings that failed to depose Slobodan Milosevic and in fact strengthened his support (York, 2002), to the failure of both Israelis and Palestinians to achieve their respective goals of security and statehood through the use of violence, to the contemporary inability of both Russia and the USA to reshape South and Central Asia and the Middle East through military force. Peace Studies examines these and similar events, on interpersonal as well as international scales, not simply as failures of tactics or timing, but as failures of some of the very theories that underscore violent adversarialism: for example, the supposition that a defeated party will "accept" defeat, or the supposition that a "victory" will not create new conflicts even as it seems to resolve its intended conflict (Fellman, 1997).

In sum then, Peace Studies attempts two tasks:

#1: An examination and deconstruction of war, seeing it as merely one possible human potential, in opposition to the widely-propagated Hobbesian view that "the natural state of men…was a mere war, and that not simply, but a war of all men against all men," with peace being nothing but "the time remaining" between wars (Hobbes, 1567).

#2: An examination and deconstruction of the human potentialities for peace, drawn not only from theory but also from the many historical examples of successful nonviolent conflict resolution in human history.

This appendix will follow that same pattern, first reviewing the field's critiques of war as an inevitable, desirable, or even successful practice in achieving political and social ends, and then reviewing the field's literature on war's alternatives.

The very phrase "critiquing war" may sound as impractical to some ears as "critiquing breathing." As has been shown, educational practices traditionally present a paradigm of war as normative, as the major driving force in human history.

Although humans seems biologically inclined (or at the very least, capable, through adrenaline surges and other biological defense/attack mechanisms) towards violence, Ehrenreich (1997) notes that

> theories of man-the-bloodthirsty-carnivore do not account for the peculiar human tendency to secularize the act of killing, to surround it with ritual and awe. There is a gap here, which scholars have sought to fill with specifically "human" feelings of altruism and guilt. (p. 37-8)

While Hobbes argues that humans only band together and perform acts of altruism so as to establish a united front against a greater danger (and Darwin, later on, explains away cooperation as merely a tactic in a larger game of hoping one's family's genes will endure), Ehrenreich presents biological evidence *against* a "built-for-killing" human. For example, our teeth do not match those of carnivores, but rather omnivores, those capable of eating either plants or animals. Neither do we possess (or is there any evidence in our evolutionary fossil records that we ever possessed) sharp claws, or any of several other adaptations traditionally associated with carnivores.

More recently, anthropologists like Douglas Fry (2006) maintain that "the assumption that all societies are necessarily aggressive not only is incorrect but also poses a danger to world peace" (p. xi). Fry distinguishes between "aggressive behavior – which refer to actions intended to harm others, and aggressiveness, the propensity or motivation to show aggressive behavior." He explains that:

War involves aggressive behavior in that the combatants try to harm each other, but how it is motivated is another issue…the motivations of the politician who declares war, the commander who orders the destruction of an enemy post, and the infantryman who fires his AK 47 are all different…the immediate causes of war lie with the politicians, generals, despots, revolutionaries, or tribal leaders [more often than with the rank and file people fighting the war]…and such leaders may in turn be motivated by rational considerations of policy, by popular opinion, by greed, by not knowing what else to do, and in many other ways. It is much more correct to say that war causes aggression than that aggressiveness causes war.

Fry thus draws a distinction between acts of aggression and the organized system of wars, claiming that "individual aggression in humans, as in various species, is a product of natural and sexual selection, but that *warfare* is not" (p. xv).

Modern mechanized war in particular seems a poor translation of biologically-based bloodlust, when today's soldiers in planes or at missile bases never even see their foe, accomplishing their killing by merely pushing buttons. Even in the heat of person-to-person battle, the "instinct to kill," if it exists, often does not assert itself as one would expect it to. Soldiers' memoirs are replete with horror and revulsion at the act of killing, of which William Manchester's (1980) account of his first killing of a Japanese soldier in the Pacific War is merely one example:

> …seeing death at this range, like smelling it, requires no previous experience. You instantly recognize it as the spastic convulsion and rattle, which in this case was not loud, but deprecating and conciliatory, like the manners of the civilian Japanese. He continued to sink until he reached the earthen floor. His eyes glazed over. Almost immediately a fly landed on his left eyeball. It was joined by another. I don't know how long I stood there staring….My father's account of the Argonne had omitted certain vital facts. A feeling of disgust and self-hatred clotted darkly in my throat, gagging me. Jerking my head to shake off the stupor, I slipped a new, fully loaded magazine into the butt of my .45. Then I began to tremble, and then to shake all over. I sobbed, in a voice still grainy with fear: "I'm sorry." Then I threw up all over myself. I recognized the half-digested C –rations beans dribbling down my front, smelled the vomit above the cordite. At the same time I noticed another odor; I had urinated in my skivvies. (p. 17-18)

Both the United States and Germany experienced difficulties in World War Two with front-line soldiers who refused to fire at the enemy, leading both militaries to

institute training programs based on desensitization and dehumanization, such as showing

pornographic films to bomber pilots in Vietnam (Fellman, 1996). If humans truly

possess and are dominated by the "killer instinct," why were these programs necessary?

Why the need for euphemistic language that distances us from war, reducing killing to

"casualties" or "collateral damage?"

Euphemisms and propaganda indeed seem prerequisites for war in a modern age.

In Mark Twain's short story "War Prayer," a "messenger from God" attempts to persuade

a war-enthused mob that "when you have prayed for victory you have prayed for many

unmentioned results which follow victory—*must* follow it, cannot help but follow it." He

cautions them that, when they pray for victory, they are also asking God to

> …help us to lay waste their humble homes with a hurricane of fire; help us to
> wring the hearts of their unoffending widows with unavailing grief; help us to
> turn them out roofless with little children to wander unfriended the wastes of their
> desolated land in rags and hunger and thirst, sports of the sun flames of summer
> and the icy winds of winter, broken in spirit, worn with travail, imploring Thee
> for the refuge of the grave and denied it. (Clemens, 1904)

The character fails in his task, but in today's media-saturated age, the images that reveal

such realities are inescapable, unless active steps are taken to mask them.

George Orwell (1950) observed that contemporary political speech in times of

war consists

> largely [of] the defense of the indefensible…[or that which] can indeed be
> defended, but only by arguments which are too brutal for most people to face, and
> which do not square with the professed aims of the political parties. Thus political
> language has to consist largely of euphemism…Defenseless villages are
> bombarded from the air, the inhabitants driven out into the countryside, the cattle
> machine-gunned, the huts set on fire with incendiary bullets: this is called
> *pacification*. Millions of peasants are robbed of their farms and sent trudging
> along the roads with no more than they can carry: this is called *transfer of
> population* or *rectification of frontiers*. People are imprisoned for years without
> trial, or shot in the back of the neck or sent to die of scurvy in Arctic lumber
> camps: this is called *elimination of unreliable elements*. Such phraseology is
> needed if one wants to name things without calling up mental pictures of them.

Contemporary media accounts of war that employ what Cohn (1988) calls "techno-strategic discourse" are the more contemporary successors to the "phraseology" that Orwell describes. Cohn attributes such language to those who wield weapons, or who identify with those wielders, gaining "the distance afforded by abstraction, the sense of control afforded by mastering [language]" (20). It was the very language defense intellectuals used, Cohn found, that gave them such power.

As one of 48 college teachers participating in a two week workshop on nuclear weapons and doctrine hosted by civilian government officials and advisors, and interviewing such figures for a year afterwards, Cohn found these men would not take her seriously unless she partook in their specialized language. As she learned this "techno-strategic" mode of expression, she grew to realize the structure of language afforded no words or phrases for detailing the horror. Cohn compares two accounts of the aftermath of a hypothetical nuclear attack, one which describes "flames that were beginning to lick their way up" and "figures" that

> loom up, black, hairless, faceless. They screamed with voices that were no longer human. Their screams drowned out the groans rising everywhere from the rubble, groans that seemed to rise from the very earth itself. (p. 19)

The other account describes a "nuclear environment, a situation bound to include EMP blackout, brute force damage to systems, a heavy jamming environment, and so on." Cohn concludes that "there are no ways to describe the phenomena represented in the first [account] with the language of the second," blaming this problem on "the difference in perspective…the speaker in the first is a victim of nuclear weapons, the speaker in the second is a user." Thus, abstract language is the language of aggressor, not victim. If human nature was to delight in such carnage, then why the need for this

abstraction, this careful construction of identity?

Fry's anthropological work (2006) examines both archeological evidence and contemporary aboriginal societies around the world, and finds that "war is rare at this band level of social organization and that conflicts tend to be between particular individuals, not entire groups" (xv). He therefore challenges the

> widely held view about the prevalence of violence and warfare in human past. When assumptions about the past are compared with actual data on nomadic hunter-gatherer bands—the best model of social life in past millennia before the rise of agriculture—it becomes apparent that the assumptions are extremely unrealistic. (p. xiv-xv)

Fry concludes that "warfare actually is very recent in a prehistoric sense, a finding that jibes with the association between war and [social] complexity" (xiv).

Fry's findings of the universality of personal aggression versus the non-universality of organized warfare matches well with the construction of war in political rhetoric. As often as they dehumanize and depersonalize, war proponents also, on occasion, attempt to recast the complex and nuanced landscape of a war in simple, *personal* terms. For example, Senior Fellow at the Ayn Rand Institute Onkar Ghate (2003) writes:

> [t]o be victorious in war, a free nation has to destroy enough of the aggressor to break his will to continue attacking (and, then, dismantle his war apparatus and replace his government). In modern warfare, this almost always necessitates "collateral damage," i.e., the killing of civilians.

Ghate not only uses the popular contemporary Orwellian or "techno-strategic" style euphemism, "collateral damage," to distance himself from those civilian victims, but furthermore collapses an entire nation of millions, through metonymy, into one single person: "the aggressor" (who notably lacks a proper name), the breaking of whose singular "will" is the goal of mass-killing. In the American consciousness during the buildup to the invasion of Iraq, every attack against what President Bush called an "evil

nation" hurt only a super-metonymized "Saddam," returning Americans to that realm of personal combat which is more biologically based. Without such efforts, without the modern institutions of the mass media as well as the mass organization of troops and resources that modernity allows, would war happen at all?

More promising even than Fry's conclusion of war as a recent addition to human behavior are his findings of various advanced conflict resolution systems among the aboriginal peoples whom he studies, reinforcing his analysis that "humans are not solely aggressive. We do indeed have propensities to behave pro-socially and cooperatively, with kindness and consideration for others…[indeed] the very existence of human societies depends on the preponderance of pro-social tendencies over…aggressive ones" (p. xiv).

Boulding (1988) also cites examples from cultures all over the world, from all time periods, societies where warfare played a more limited role, such as Eskimo cultures bereft of any word for war in their vocabulary, or the non-zero-sum cattle warfare of the pre-Spartan Greeks and pre-Mfecane Bantu peoples in Southern Africa which more closely resembled the Western idea of sporting events than battles. Even in the West, examples like William Penn's nonviolent management of the Pennsylvania Colony (detailed in Nagler, 1997) speak of warless conflict management on a large scale. Warfare clearly seems to be just one of many possible conflict resolution options available, and employed, in human history.

Most Peace Studies scholars therefore construct war as product of human *culture* as human *nature*, and not all human cultures at that. Some gender theorists in Peace Studies (McBride, 1995; Adams, 1999, and many others) posit that war is a product

specifically of *male* culture, or male acculturation to the idea of violence as a normative, and not aberrant, component of masculinity (Jhally, 1999).

This view, too, suffers from limitations. It fails to explain the determination of women like Susan Faulkner who seek admission to aggressive environments like the Citadel, violently competitive female sports like rugby and women's boxing, and female warrior roles or female warrior deities in a variety of world cultures. Additionally, it discounts the nurturing, non-adversarial practices of men (Fellman, 1996).

Some Marxist Peace Studies critics lay the blame for modern war upon capitalism and the adversarial paradigm it invokes, alienating workers from one another, setting them at odds and discouraging cooperation if it interferes with self-interest. But beyond these tendencies, which would not necessarily equate with organized warfare on a national scale, the continuation of capitalism, say many Marxists, is predicated on war. Lenin (1915), for example, outlines the situation as follows:

Capitalism, formerly a liberator of nations, has now, in its imperialist stage, become the greatest oppressor of nations. It has developed the productive forces to such an extent that humanity must either pass over to socialism, or for years, nay decades, witness armed conflicts of the 'great' nations for an artificial maintenance of capitalism by means of colonies, monopolies, privileges, and all sorts of national oppression.

Seligman (1999) explains why:

> …no national capitalist state can have a self-contained economy because natural resources are unevenly distributed around the world. Also, the consumer market for the things produced cannot absorb the total, so markets for these things must be sought outside the national boundaries. Capital investment outlets must be sought outside the national boundaries as well….so the imperialist countries try to solve their problems (of increasing their profits by finding markets for their goods and investments) by lowering their costs for raw materials; by gaining, or holding control over sources of these raw materials and extending the range of the

available commodity market; by getting new outlets for capital investment; and by the super-exploitation of peoples in the less developed areas of the world…These aims-for cheap raw materials, cheap labor, and foreign markets in which to sell goods and make investments for capital are pursued rapaciously during peacetime with the use of loans, tariffs, expeditionary forces, bribery, intrigue, corruption, and intelligence (as in CIA). But, the stakes for the competing nations are so high that, periodically, the contest breaks out in war.

Seligman also explains how military technologies (such as the means of harnessing nuclear energy) are soon adapted to civilian uses (like nuclear power plants or food irradiation), which not only cements these technologies into public acceptance but increases productivity, which then "exacerbates the competition for work at home and the over-production of goods, which pumps the process of foreign exploitation and the search for markets," perpetuating war.

Leaving aside the history of military aggression and wars of imperial conquest by self-described Communist nations in the twentieth century, Gottlieb (1997) problematizes the capitalism/militarism equation by detailing how capitalism encourages militarism, only to have the latter derail the economic structure necessary for the former. His critique of the United States' defense industry points to their ceiling-less budgets, lax production standards, near-limitless deadlines, lack of quality control and, most glaring of all, *lack of demand for the product* (at the time of Gottlieb's writing, the United States faced no significant military threats). Even in today's "post September 11 ideology," America remains the sole "superpower" in the sense of traditional military armaments. Today's so-called "War on Terror," the view of many, including no less a hawkish personage than former Secretary of State Donald Rumsfeld, requires a smaller, leaner set of armed forces (Sappenfield, 2005).

In a practice that seems less indicative of the market demands of capitalism than of

socialist-style protectionism, however, the American public values the jobs that military

and defense projects provide, to the extent that we are "addicted" to maintaining them

rather than practicing more efficient economic conversion (Gottlieb, 1997). Although

Gottlieb outlines numerous difficulties in re-training defense workers and especially

defense *firms* (who, accustomed to generous subsidies and contracts, are ill prepared for

fierce economic competition) from military to civilian projects, Joseph (1993) maintains

that, contrary to the maxim that defense spending creates jobs, "less employment is

generated by military spending than by other forms of government spending, such as

investment in health care or education" (p 34). He elaborates:

> In 1981, for example, spending one billion dollars on guided missile production
> created 9,000 jobs. Spending the same amount on public transit would have
> created 21,500 jobs, on education 63,000 jobs and on pollution control 16,500
> jobs...countries such as West Germany and Japan have registered higher rates of
> productivity growth while devoting lower proportions of their GNP to defense
> than the United States.

Clearly, then, the free market's laws of supply and demand do not seem to match up as

clearly with military spending as the Marxists would like.[vi]

Quinn (1995) is typical of most modern day Peace Studies theorists when he

speaks of war being a product of "Mother Culture." Has everyone who says "we need

military spending to keep the economy strong" *really* studied the economy to see if this is

accurate? What about war-budget supporters who don't even work in the defense

industry, who have no first-hand experience, who in fact *suffer* from its effects when the

public services upon which they depend deteriorate in order to pay for military projects.

People like this, according to Quinn's character of Ishmael,

> believe in their [ideas] even when they enjoy none of its benefits. There are no
> grumblers, no dissidents, no counterrevolutionaries. They all believe profoundly
> that, however bad things are now, they're still infinitely preferable to what came
> before. (p. 218)

Quinn and others, including Fellman (1997), argue that practices like war, far from being inevitable facts of human biology or even of human economics, are particular social constructions, created by humans for humans, which are subsequently taken as almost "divine truth":

> That's all our lawgivers gave us – inventions. Contrivances. Not things that proved out over thousands of generations, but arbitrary pronouncements about *the one right way to live.* (Quinn, 1995, p. 205)

It is in this vein that Fellman (1997) rejects the idea of an opposition between advocates of peace and "realists." "Realism," he writes, "has little to do with reality. Rather, it is an ideological device that blunts our reactions to injustice and cruelty" by making us think that they are all "facts of life," leaving us no other choice but to accept their presence.[vii]

Indeed, as frequently as political rhetoric glorifies war, it just as often presents war as an endeavor to be pursued with reluctance and resignation, something imposed on an unwilling populace by an outside force. Even preemptive wars are often presented to the public as inevitable wars of self-defense, including the current US war in Iraq and the Israeli initiation of the 1967 war. No less aggressive a government as the Nazi regime still employed a gambit of dressing German commandos in Polish uniforms to commit acts of sabotage in order to create an image of its 1938 invasion of Poland as an act of German self-defense. Aggressive war was sold, even by Adolf Hitler, as an unpalatable last-ditch resort of self-preservation. At the Nuremberg trials, Hitler's third in command, Herman Goering, freely admitted as much:

> Why, of course, the people don't want war…Why would some poor slob on a farm want to risk his life in a war when the best that he can get out of it is to come back to his farm in one piece? Naturally, the common people don't want war…But, after all, it is the leaders of the country who determine the policy and it is always a simple matter to drag the people along, whether it is a democracy, or a fascist dictatorship, or a parliament, or a communist dictatorship…the people can always be brought to the bidding of the leaders. That is easy. All you have to do is tell them they are being attacked, and denounce the pacifists for lack of patriotism

and exposing the country to danger. It works the same in any country (Gustave, 1946)

I will stipulate from here on in, then, that war is a tool. It is not some inevitable, biological human function, like belching, which requires no explanation for its existence, but more like a hammer or screwdriver, one of many tools that can be used to accomplish a task. We can then ask the question of whether war is the best-suited tool for a given group's aims, such as gaining resources or defending oneself from an aggressor.

Peace Studies scholars have made it their work to study just how well war works as a tool. They argue that violence has a poor track record of success, such as Wink (1992), who reminds us that

> even those who are armed sometimes find themselves helpless to intervene. The United States, even though it possessed more armaments than any nation in history, was utterly powerless to save East Germany in 1953, or Hungary in 1956, or Czechoslovakia in 1968, or the Chinese students and workers [in Tiananmen Square] in 1989. (p.232)

For Wink and others (Nagler, 1997; Sharp, 1973), the success of violence, no less so than the success of nonviolence, depends upon the possession of superior power and leverage. For this reason, "the agony of being unable to save another is not reserved for those who have chosen the nonviolent path" (Wink, 1992, p.232). If one considers that every war has at least one losing party, then at best war as a tool has a mere 50 percent success rate.

In reality, though, both "sides" always suffer losses of some sort. Even when examining the state of the "victors" of contemporary armed conflicts, Peace Studies scholars find evidence to support Olof Palme's conclusion that "war is losing its meaning as an instrument of national policy, becoming instead an engine of senseless destruction that leaves the root causes of the conflict unresolved" (Palme in Joseph, 1993, p. 20). Not only does a full-scale nuclear confrontation threaten to destroy all human life on Earth (thus rendering war a rather useless means of achieving a national goal), even non-nuclear wars have steadily lost their ability to settle conflicts in an increasingly

interdependent global atmosphere:

> As a consequence of industrialization, countries have far more to lose by war's destructiveness than they have to gain by acquiring whatever is left [after a war] of another country's infrastructure. Raw materials are of relatively less importance and can be secured far more cheaply through trade than by forced acquisition. (p. 16-7)

This was evident in the first Persian Gulf war, where, in the hopes of securing Kuwaiti oil and preventing global oil prices from rising, the United States' military expenditures in Desert Shield alone resulted in a net *increase* in the cost of obtaining oil by $31 a barrel (AFSC, 1990). This was before the Desert Storm war even began, during the course of which Kuwait's oil fields were set ablaze, incurring still further costs. A war against another nation is of limited value if the resources the attacker seeks are destroyed or contaminated in the process, or if the monetary cost of the conflict outweighs the value whatever the attacker is trying to acquire or secure.

Earlier wars have a similarly weak track record. Ackerman and Duvall (2000) critique the long standing tradition of armed rebellion as a means towards social liberation and the construction of a better society, which is a practice that was shared and advanced by such widely diverging figures as Thomas Jefferson, Karl Max, Mao Zedong, Franz Fanon, Osama bin Laden and George W. Bush. Both Russia and China's Communist revolutions successfully toppled governments but failed to create the just societies the revolutionaries sought; arguably, they created even *more* oppressive societies than those they replaced, as did many of the African rebellions that overthrew their colonial masters. Osama Bin Laden's goals of removing Western influence from the Middle East through intimidatory violence produced the opposite effect, pushing the West to escalate its military operations in the region. Similarly, America's 2003 invasion of Iraq, whose stated goal was to stabilize the Middle East, has been followed by a record surge in Middle Eastern violence. Even the American Revolution, cheered by Thomas

Jefferson, did not immediately create the free, liberal society he envisioned: for almost a hundred years the new nation created by that violent upheaval disenfranchised over half its population, and both perpetuated slavery and denied female suffrage long after its former British overlords abolished both practices. Ackerman and Duvall clarify that "it is not a myth that violence can alter events. It is a myth that it gives power to the people" (p.459).

Nevertheless, the idea of war as a tool of justice is imbedded in many cultures, perhaps best recognizable in the West in one or more permutations of "Just War Theory." Articulated by Augustine in *Civitas Dei* during the fifth century as a way to try and rationalize the basic pacifistic precepts of Christianity with the Roman aims of warring against Barbarian tribes (Wikipedia, 2008), the doctrine has been modified many times since. One of the most influential Just War theorists was the thirteenth century theologian Thomas Aquinas, who in *Summa Theologiae* outlines Just War as one that "that avenges wrongs, when a nation or state has to be punished, for refusing to make amends for the wrongs inflicted by its subjects, or to restore what it has seized unjustly" (Aquinas in English Dominican Fathers, 1947-8). As detailed in the previous paragraph, however, war by its very nature seems to have a very limited ability to create just outcomes. While some Peace Studies scholars argue that war can indeed achieve just outcomes, these are short-term outcomes only, and will inevitably create a cascading effect of unjust outcomes in its wake. Like pounding lumps on a waterbed, Nagler (1997) argues that the use of violence to beat down one "lump" often causes other "lumps" to arise:

In the real world, violence does, at least sometimes to be sure, achieve its immediate purpose. There is no question of that…[but] because the media present and re-present this one side of the story, we plain do not notice that a raft of other things, some of them much more important in the long run, "ripple out" as the "event cone" of violence widens more and more. We do not notice that most of the homeowners who go get their guns are overcome or even killed by their much more professional intruders, just as many of the people who pull out a gun or knife in some kind of quarrel end up the victims of "victim precipitated homicides"…every time an act of violence "works"—and let's repeat, some of them do—there's trouble somewhere down the road. (p. 104-5)

Nagler examines the brutal tactics of the Marcos regime in the Philippines and the US invasion of Iraq in the first Gulf War as examples of how, "in its event cone, the working of violence begins to look a lot less 'surgical' [but rather] create[d] a `butterfly effect' of cascading disorder…it didn't have successful long-term results" (p. 104-5,109). For example, he characterizes the US bombings of Iraq during the first Gulf War of doing more than just forcing the withdrawal of Iraqi forces from Kuwait, but also of destroying so much infrastructure and starving so many hundreds of thousands of people that long-term domestic resistance to Saddam Hussein's rule actually weakened, setting up the grounds for a future war in which the support of the Iraqi people would not aid the US invaders. History seems replete with similar "negative ripple effects" of violence, just as the Triple Entente's defeat of the Kaiser's army's expansionism paved the way for the rise of the Nazi party. Nagler also argues that the Marshall Plan, and not World War II, truly created stability in Europe. Had such constructive methods been applied after World War I, he wonders, would Hitler have ever found conditions ripe for his rise to power to begin with?

Another element of Just War theory, according to paragraph 2309 of the Catechism of the Catholic Church, is that "the use of arms must not produce evils and disorders graver than the evil to be eliminated" (Catholic Answers, 2005). It is on this ground that the Allied opposition to the Axis in World War II, the classic test case for Just War, comes under scrutiny by nonviolence scholars. Nagler (1997) uses a rheostat

model (p.123-5) to examine whether there existed moments before and during the escalation of Hitler's rise to power where nonviolence methods could have been applied to prevent the situation from escalating to the point where most critics would say, "How would nonviolence stop Hitler?" At the point where the Allied opposition began in earnest, particularly the US involvement, it was nearly impossible for *violence* to stop Hitler, and World War II "worked" at a cost of over 25 million solider-lives alone and 41 million civilian deaths—over 50 million if one counts the victims of the Holocaust (Wikipedia, "World War II casualties," 2007). These figures, staggering as they are, fail to include the injuries, physical and psychological, to those soldiers and civilians who survived.

The 2:1 civilian to soldier death ratio in World War II highlights the fact that civilians, for whose lives so many wars are ostensibly fought in order to save, suffer more than soldiers during times of war, and this must be evaluated as a potentially greater "evil," perhaps, than whatever the war is being fought to save them from. Estimates as to the proportion of civilian deaths in more modern conflicts are even more staggering:

> In the "low-intensity" wars of the late twentieth century—the wars of the Ivory Coast, Somalia, Sudan, Liberia, East Timor and the Former Yugoslavia— civilians constitute 90 percent of the dead. (Ehrenreich, 1997, p. 227)

Senator Joseph Biden of the US Senate Foreign Relations Committee issued a statement (Biden, 2003) that "90 percent of the casualties in *any* war are civilians" (emphasis mine). Wink (1992) points out the

> considerable irony in the presumed compassion of the interlocutor who is so concerned about the potential rape of a single grandmother, when the same questioner accepts war, where the rape of grandmothers, wives, daughters and children is so routine that many soldiers have regarded it as one of the prerequisites of warfare. (p.233)

> Wink (1992) provides a more personal critique of the notion of violence as a

necessary tool for protection. He addresses the classic challenge to pacifists, the

hypothetical example of an assailant holding a gun to the head of your spouse or child as a situation that would tempt anyone away from nonviolence. Wink responds with the question: Would violence actually be of aid? Is there any method of attack you could envision that could save your wife or child before the assailant shot them at pointblank range?

> Criminals usually attack only when they are certain they have the advantage of surprise and superior weapons. Will you turn on [an attacker] with your fists, when he is armed with a revolver or AK 47? Or does the hypothetical case assume that you routinely pack an Uzi submachine gun, that you have it at your instant disposal, that you are shielded from the attacker, and that you can wipe out the assailants without danger of killing the very people you intend to protect? (p. 232)

Wink relates the following account:

> William Jennings Bryan once visited Tolstoy and pressed him with the perennial problem of what to do if a criminal is about to kill a child. Tolstoy responded that, having lived seventy-five years, he had never, except in discussions, *"encountered that fantastic brigand, who, before my eyes desired to kill or violate a child, but that perpetually I did and do see not one but millions of brigands using violence toward children and women and men and old people and all the labourers in the name of the recognized right of violence over one's fellows."* (p. 233)

Wink argues that attempts to nonviolently engage or change the expectations of the attacker will probably fare *no worse* than an act of violence, and possibly better. (Wink cites an incident of a woman who talked her way out of a mugging.) "The truth is, nonviolence generally works where violence would work, and where it fails, violence too would fail." Nonviolence, though, is the preferred choice because it has the potential to lead to scenarios where both parties can gain, while in war it is a certainty, says Waltz (1959) among others, that both parties lose:

> Asking who won a given war, someone has said, is like asking who won the San Francisco earthquake. That in wars there is no victory but only varying degrees of defeat is a proposition that has gained increasing acceptance in the twentieth century. (p. 1)

Under this reasoning, Just War becomes an oxymoron. If Wink is correct that nonviolence and violence have a more or less equal capacity for social change, then "the burden of proof must always be on the proponent of violence to explain why war is preferable, especially when nonviolence has usually not even been tried" (Wink, 1992, p. 239).

Although even Gandhi, while not a Just War theorist *per se*, advocated violence in some immediate, short-term situations, he too saw severe limitations to its ability to maintain safety. As Juergensmeyer (2007) explains:

> Occasionally violence does indeed seem to be the only response available. Gandhi provided some examples. One was the mad dog. On confronting a dog with rabies, one must stop it by any means possible, including maiming or killing it. Another case that Gandhi offered was a brutal rapist caught in the act. To do nothing in that situation, Gandhi said, makes the observer "a partner in violence." Hence violence could be used to counter it. Gandhi thus concluded, "Heroic violence is less sinful than cowardly nonviolence." (p.33)

Juergensmeyer urges us, however, to keep in mind that

> Gandhi made a distinction between detentive force—the use of physical control in order to halt violence in progress—and coercive force. The latter is meant to intimidate and destroy, and hinders a Gandhian fight aimed at a resolution of principles at stake. (p.35)

Juergensmeyer goes on to explain, however, that such "in the moment" fixes for terrorist violence are useless if nonviolent, constructive and holistic measures are not also employed:

> Responding to terrorism after the fact…is quite a different matter. What Gandhi argued in *Hind Swaraj* was that violence never works as a response to violence. It usually generates more violence as a result, and precipitates a seemingly endless litany of tit-for-tat militant engagements. (p.34)

For Gandhi, says Juergensmeyer, the problem was not terrorists themselves, but the "mad ideas" for which they fought:

...it would be an enormous mistake—foolish, from a Gandhian point of view—to fixate on terrorist acts solely as deviant behavior without taking seriously the causes for which these passionate soldiers were laboring. (pg)

Without addressing the core beliefs and issues that motivated terrorism, Gandhi believes, violence will only reinforce terrorists' determination. Fellman (2006) concurs, characterizing both Israeli and US military responses to terrorist attacks as proceeding from the misguided assumption that "there are a fixed number of terrorists, and if we can kill them all, we'll be safe." Fellman feels that such an approach ignores the rationale behind Hamas or Al Qaeda's violence as a fight against Western military aggression. The continuance of Western military aggression, in his view, reinforces the power and validity of their narrative, and even as military strikes kill a number of believers, they simultaneously provide recruiting material for those believers' replacements.

War, when scrutinized by Peace Studies, begins to look more and more unfeasible on practical as well as moral grounds, and it is doubtful that even so-called "Realists" would argue against war's many failings. Most would likely say, as Churchill did of democracy, that war is "the worst system in the world, except for all those others that have been tried."

Peace Studies presents a challenge to this final defense of war as well, by illustrating the many historical examples[23] of successfully employed nonviolent conflict resolution.

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[23] History and social studies might be the most obvious disciplines in which to include academic peace education, and this appendix deals almost exclusively with them, but a truly interdisciplinary approach would create an even more peaceable environment. As mentioned earlier in this chapter, Laurie Stevahn's TSBP experiments took place in English classrooms. There is a long history of scientists, most notably Albert Einstein and Alfred Nobel, who were outspoken advocates of peace and believed in science's role as a peacemaking tool; science classes could, for example, include the context of these people and their achievements. Physical education classes could explicitly address the adversarial, physically violent components of games like dodge ball (whose origins, perhaps apocryphally, have been attributed to military training operations) and compare and contrast them with more self-reflective practices like yoga, or cooperative games.

The traps of violent conflict, says Wink (1992), persist because "violence will be unavoidable in situations where people are not prepared to wage conflicts nonviolently" (p. 240). As Boulding (1988) points out,

> since no one can work seriously for an outcome that seems inherently impossible, the unimaginability of a world secured by other social arrangements than those of military establishments stands in the way of serious political moves towards arms reduction, l*et al*one disarmament (p. 112)

Fortunately for nonviolence advocates, nonviolent conflict resolution is not unimaginable at all, as history is replete with incidents of the successful employment of nonviolence to settle conflicts.

Thus far, this paper has not yet established a definition of nonviolence. Nonviolence theorists, as a subset of Peace Studies theorists, span a wide spectrum and posit a dizzying array of different definitions, a full exploration of which is beyond the scope of this paper. For now this paper will user Weber's categorization (2003) of nonviolence into two main trunks, which he terms

> "principled," where emphasis is on human harmony and a moral rejection of violence and coercion, and "pragmatic," where conflict is seen as normal and the rejection of violence as an effective way of challenging power. Failure to distinguish between the two strands can lead to a diminution in the effectiveness of nonviolent action and can cause confusion among the audience.

Although as they would likely challenge Weber's characterization of their beliefs as somehow lacking practical application, adherents of "principled" nonviolence, which in his view would include those like the fourteenth Dalai Lama and Thich Naht Hanh or organizations like the Quaker Friends Societies, hold nonviolence as a sacred principle at times separate from a tangible use of that principle, tactically, to accomplish a concrete end. Such groups and individuals might engage in public demonstrations or use writing

and other media to attempt to affect political discourse, may even engage in civil disobedience, but these are operations worlds apart from the specific, goal-oriented, coordinated strategic endeavors of the second group.

Individuals like Martin Luther King and Gene Sharp and groups like the SCLC, OTPOR and Solidarity offer examples of the so-called "pragmatic" school of nonviolence. While usually informed by the moral structures of "principled" nonviolence, the primary focus of these parties was the use of nonviolent means and tactics as the best available tools for accomplishing political goals. They mapped out and executed nonviolent campaigns that dramatically shifted power in favor of their agendas. Thinkers in this group often reject labels like "pacifism" as implying lack of action, or in extreme cases, appeasement (INNATE, 2006).

Westmoreland-White (2002) proposes that

both schools of thought are partly right. For the pacifist, Christian or otherwise, nonviolence is a way of life. Cut off the theological or spiritual underpinnings of nonviolence and it no longer makes sense to such persons, among whom I count myself. But in any mass movement, the majority of participants will not be convinced pacifists. They will engage in nonviolence as a strategy for change.

Indeed, there is considerable overlap between these two categories, but clear dividing lines do exist at times. Although the "pragmatic" practitioners may share many of the same precepts as the "principled" ones, the two categories do not by necessity overlap. For example, the Dalai Lama, in the "principled" camp, writes about the necessity of feeling compassion for all human beings, including and especially one's enemies, and of putting this belief into practice:

Obviously, it is not enough for us simply to think about how nice compassion is! We need to make a concerted effort to develop it; we must use all the events of

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our daily life to transform our thoughts and behavior…a truly compassionate attitude towards others does not change even if they behave negatively…For a person who cherishes compassion and love, the practice of tolerance is essential, and for that, an enemy is indispensable. So we should feel grateful to our enemies, for it is they who can best help us develop a tranquil mind! Also, it is often the case in both personal and public life, that with a change in circumstances, enemies become friends (Gyatso, 1991)

However, no such compassion was necessary for the Solidarity revolution in Poland or OTPOR movement in Serbia. Far from it; in the latter case, a popular unifying song of that movement in its struggle to unseat Slobodan Milosevic included the lyric, "Slobo, go kill yourself!" (York, 2002).

Both "camps" would be eager to claim Gandhi among their ranks, and indeed, Gandhi synthesized both of these approaches. His principled moral stance seems extremely similar to that of the Dalai Lama when he says, "It is easy enough to be friendly to one's friends. But to befriend the one who regards himself as your enemy is the quintessence of true religion. The other is mere business," or when he declaims rape by saying "I will far rather see the race of man extinct than that we should become less than beasts by making the noblest of God's creation, woman, the object of our lust" (Gandhi in PeaceCENTER, 2006). However, Gandhi also used these beliefs as the guidelines for tangible, tactical maneuvers, of the kind which brought measurable political change.

Because of the tangible accomplishments that can be directly related to the so-called "pragmatic" group's nonviolent actions, it is easier to measure their effects. Gene Sharp, nearly universally recognized as the modern-day father of the "pragmatic" school of nonviolence, defines nonviolence in *The Politics of Nonviolent Action* (1973) as an active, strategy based system of transferring power to you and away from an opponent,

without the use of violence. Removing the last phrase of that sentence would make for an acceptable definition of war, and indeed, for Sharp, the planning and execution of nonviolent campaigns shares much in common with violent warfare. Examples of campaigns that would fit Sharp's definitions (and indeed, several of the latter-day ones were consciously constructed around his model) include:[viii]

- Russian Orthodox Priest Georgii Gapon and other organizers of the 150,000+ workers in 1905 that played a key role in the creation of Russia's first popularly elected parliament (Ackerman and Duvall, 2000).

- A miners' strike in Germany in 1923 that thwarted the Belgian and French army's attempts to take over their resources (Ackerman and Duvall, 2000).

- Nonviolent protests outside the Rosenstrasse Prison in Germany wherein 3,000 unarmed women forced the SS to release their Jewish husbands from captivity (Nagler, 1997).

- Danish citizens refusing to aid their Nazi occupiers in 1944, forcing the Nazi occupiers to end the curfews and blockades in their country (Ackerman and Duvall, 2000).

- The eight-month thwarting of the Soviet occupation of Prague in 1968 due to citizen noncompliance, and the eventual nonviolent overthrow of the Communist government thirty years later in the "Velvet Revolution" (Nagler, 1997).

- Salvadoran students, doctors, and merchants forcing the military dictator

    Maximiliano Hernandez out of power and into exile, all without firing a

    shot, in 1944 (Ackerman and Duvall, 2000).

- The Solidarity movement in 1980s Poland which brought about the end of

    Communist rule through strikes, work stoppages and other nonviolent

    actions (York, 1999).

- The "No" Campaign's ousting of Chilean dictator Augusto Pinochet (York,

    1999).

    - The student-led OTPOR campaign that ousted Serbian dictator Slobodan

    Milosevic in 2000 (York, 2002).

- The former Soviet Republic of Georgia's Orange Revolution in 2004 (York,

2007).

- The successful nonviolent overthrow of Nepal's King Gyanendra in 2006,

leading to the instatement of a democratic republic (Mishra, 2006).

This list barely scratches the surface of humankind's nonviolent tradition in this

century alone, not to mention previous efforts like Penn's governance of the

Pennsylvania Colony based on nonviolent principles or Ashoka's nonviolent empire in

ancient India (Nagler, 1997). Indeed, Wink reports that in 1989 alone,

> thirteen nations comprising 1,695,000,000 people experienced nonviolent
> revolutions that succeeded beyond anyone's wildest expectations ... If we
> add all the countries touched by major nonviolent actions in our century
> (the Philippines, South Africa ... the independence movement in India ...)
> the figure reaches 3,337,400,000, a staggering 65% of humanity! All this

in the teeth of the assertion, endlessly repeated, that nonviolence doesn't
work in the "real" world (Wink in Ives, 2001)

The sources cited offer detailed descriptions of the chronology of these

movements, their tactics, and their successes and failures, but all of them shared in

common the use of nonviolent means to seize power from the powerful, even those as

cruel and uncompromising as Adolf Hitler, Joseph Stalin and Slobodan Milosevic. Far

from only working against "nice" opponents or those who are willing to engage in

negotiations, "pragmatic" nonviolence requires no particular kindness or openness to

dialogue from its opponents.

As VanHise (2007) explains,

> Sharp puts forth two ways of looking at the nature of political power. One is the
> monolithic model, where people are dependent on their ruler for support. This
> model assumes the government is "...a 'given,' a strong, independent, durable (if
> not indestructible), self-reinforcing, and self-perpetuating force."From this point
> of view, the only means of opposing the power structure is with overwhelmingly
> destructive force. This model provides the justification for war and violent
> revolution. *The monolithic theory of power is only true when both the rulers and
> the ruled believe it is. For obvious reasons, this is a conception of power that
> those with power like to perpetuate.* (emphasis mine)

However, VanHise goes on to explain Sharp's theories,

> …a more realistic view of political power recognizes that rulers derive their
> power from those over whom they rule. The cooperation of those around a ruler is
> absolutely essential if (s)he is to have any power at all.

Using the successful nonviolent liberation of India as an example, Gandhi and

those like him, through noncompliance and refusal to work the engines of the British

colonial-mercantile complex, denied their British rulers the source of cheap labor and

goods for which the British invaded India to begin with. Although Gandhi believed

nonviolence gave his movement the moral high ground (Wink, 1991; Juergensmeyer,

2007), moral hesitation, if any, did not stop the British army from killing unarmed, nonviolent civilian protestors; the 1919 Amritsar Massacre in which British soldiers killed 400 Indians and wounded 1200 others (Britannica, 2003) was the most publicized, but hardly the only instance, of such events. But a slaughtered Indian, or a jailed Indian, was not an Indian who could work in the salt mines or spin thread. The British possessed the power to kill or imprison, but not the power to compel work if these two means failed. To paraphrase Gandhi, if he were to be killed, his killers would have only his body – not his obedience. Since the Raj's aim was not genocide but the procurement of labor, they, for all their military technology and prowess, were rendered helpless to accomplish their goals.

Even in cases where an opponent's goals did consist of mass murder (Hitler at Rosenstrasse, Pinochet in Chile), nonviolent practitioners managed to rob said mass-murderers of their ability to order the deaths of others by robbing them of the support of their followers. As VanHise explains,

> without at least the passive support of the general population and his/her agents (cabinet members, aids, legislative bodies, police, military officers, etc.) the most powerful dictator in the world becomes just another crackpot with dreams of world domination. The technique of strategic nonviolence is based on this insight.

The fact that the Rosenstrasse demonstrators were *untrained* in formal nonviolent tactics (Nagler, 1997) yet still thwarted Hitler is all the more remarkable:

> It's unlikely that more than a handful of those involved even knew the name of the force they were wielding, much less how to build on it. As a full-fledged insurrection, it was too little, too late—as if the women had any such intention….thus, without leadership or a sense of how to proceed, they were naturally not able to capitalize on their discovery. (p. 118)

Had such leadership and strategy been organized across the Reich (as it was, successfully, in Denmark), the Nazi menace could possibly have been defeated through

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some other means than those that cost 75 million lives, 50 million of whom were civilians.

A lower body count is not the only appeal of nonviolent methods. As Wink explains (1992), in a conflict, "if one side prevails using violence, the other must lose. Not so nonviolence. When it succeeds, there is a sense in which both sides win (p.239)," or at least there lies the potential for what negotiators call "mutual gains," a settlement wherein both parties feel as if they have derived some benefit (Thompson, 2005). While Gene Sharp's definitions of nonviolence require no exertion of mutuality (one can fight a dictator, nonviolently, without any need to humanize him), Fellman (1988) raises the possibilities of nonviolence to transcend enemy relations and create cooperation. As he writes,

> …until now most encounters have been organized so that the point of them is to overcome the other. This is true for the most part of relations between men and women, parents and children, whites and non-whites, leaders and publics, rich and poor, labor and management, athletic teams, business firms, advanced societies and developing societies, straight and gay, tall and short, well and ill, and so on. I call this adversary assumption that one must strive to overcome or submit to being overcome the basis of the adversary paradigm. The ultimate expression of the adversary tendency is murder, and that collectively is war. Historically, alongside the adversary paradigm and in secondary relation to it is the mutuality paradigm, based on the mutuality assumption that the other can be a friend, a colleague, an ally.

Mutuality, as Fellman defines it, was a part of the eventual nonviolent handover of power from the Apartheid government to the democratically elected African National Congress in 1994, for example, in the form of mutually negotiated transfers of power and the construction and execution of Truth and Reconciliation Commissions to deal with issues of justice for past crimes. While a nonviolent revolution certainly *could* have taken place without these mutualistic developments, it seems impossible to imagine such agreements

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arising from a successful violent rebellion. Fellman explains how mutualistic outcomes short-circuit the endless "tit for tat" pattern of revenge that comes from adversarial conflicts, violent and nonviolent alike: "The problem with the goal of winning is that the loser never excepts defeat" (Fellman, 1997). Transforming the rules of the game from zero-sum to mutual gains, he argues, is the best guarantee of future stability. Indeed, India and South Africa achieved, through their nonviolent, mutuality-inclusive revolutions, an end result wherein they are functional democracies, far more stable than any other former European colonies who overthrew their foreign rulers through violent means.

Fellman (1988) goes so far as to "claim that a more fully mutualistic society is already at hand, but in minor form that is difficult to recognize until it is identified." Events like the "Christmas truce" between warring soldiers during World War I where German and British troops crossed battle lines to celebrate the holiday together in 1917 would seem to indicate that, even during wartime, humans will risk their lives for mutualistic efforts to connect with the "other." Hedges (2003) relates an anecdote of the Fejzic family of Bosnian Muslims, who kept a starving Serb soldier named Zoran—representing the very army that was raping and killing their people, and which had in fact killed their sons—alive by feeding him milk from their cow (p. 50-3). As Hedges describes, Zoran's family

> said they grieved daily for their sons. They missed their home. They said they could never forgive those who took Zoran from them. But they also said that despite their anger and loss, they could not listen to other Serbs talking about Muslims, or even recite their own sufferings, without telling of Fejzic and his cow. Here was the power of love. What this illiterate farmer did would color the life of another human being, who might never meet him, long after he was gone. In his act lay an ocean of hope. (p.52)

Hedges concludes that

> These acts, unrecognized at the time, make it impossible to condemn, legally or morally, an entire people. They serve as reminders that we all have a will of our own, a will that is independent of the state or the nationalist cause. Most important, once the war is over, these people make it hard to brand an entire nation or an entire people as guilty. (p.53)

Hedges draws a distinction here between citizens' personal desire for mutualistic approaches and the desires of a political entity like the state. Waltz (1953) concurs that "the major causes of war lie neither in men nor in states but in the state system itself...though a state may want to remain at peace, it may have to consider undertaking a preventative war…what the state will be like depends on its relation to others" (p. 6-7). But Boulding and Woodward remind us that the fate of the world does not necessarily lie in the hands of nation-states. Nongovernmental organizations (NGOs) have the freedom to operate without having to worry about preserving "national interests," and in fact have done so on the international scale in incidents like the nonviolent breakaway of the former Yugoslav nation of Macedonia, negotiated almost entirely by NGOs and the United Nations.

> Given the characteristics of the nation-state system, we should not expect many progressive initiatives in this regard from national governments (though they may be exceptions). In the years ahead "peacemaking" will depend largely of the effect of nongovernmental groups both for the creation of a corps of skilled mediators and for the establishment of new "extragovernmental" channels of communication through which intervention in conflict can occur (Woodward, 1981)

It is not surprising that the general populace, if not their leaders, are increasingly attempting (and must be increasingly relied upon) to take a greater role in peacemaking, for as detailed several times earlier in this paper, they are by far the predominant victims of warfare. The recent surge of terrorist threats in the traditionally "secure" Western countries serves to further dissipate the notion that only soldiers will be killed in war; so

too may come the abandonment of the idea that only soldiers and military officials can decide the course of war. As Ehrenreich (1997) explains,

> When the practice and passions of war were largely confined to the warrior elite, popular opposition to war usually took the form of opposition to that elite. In the situation where everyone is expected to participate in one way or another, and where anyone can become a victim whether they participate or not, opposition could at last develop to the institution of war itself. (p. 239)

War not only threatens the people of the world with death by weaponry, but with environmental destruction caused by weapons, and the nuclear and chemical byproducts of weapons' creation, and by the industrialization process that eats up planetary resources and pollutes the environment in the quest to manufacture weapons. The Department of Energy's estimated costs for cleanup of nuclear waste alone in 1989 totaled $40-$70 billion dollars, although only a mere $401 million was allocated for that task (Peach in Joseph, 1993, p. 31). The situation has no doubt worsened since then. Matthews (1989) reminds us that the GNP, a measure of a country's prosperity, does not factor in resource depletion: "A country can consume forests, wildlife and fisheries, its minerals, its clean water and topsoil, without seeing a reflection of the loss in its GNP" (p. 173). Thus, indications of a "strong economy" can fail to warn us of the dangers ahead brought on by dwindling resources.

Even citizens of militarily powerful countries suffer when their infrastructure, as discussed above, deteriorates because the majority of economic resources are geared towards war production. Even in 1988, a year without major American military operations, the U.S. Defense Fuel Supply Center purchased 206 billion barrels of petroleum for military uses, which would have been enough to run the entire public transit system of the United States for 22 years (Joseph, 1993, p. 22). According to the National Priorities Project (2007),

> Taxpayers in the United States will pay $137.6 billion for the cost of the Iraq War in FY 2007. For the same amount of money, the following could have been

provided: 39,240,332 people with health care, 2,342,626 elementary school teachers, 1,070,377 affordable housing units….

Finally, there is the psychological cost to a populace of living in constant fear of enemy attack, an ironic loss of security that comes with a security-intensive government campaign, detailed in Joseph (1993) and elsewhere. All of these reasons provide motivation for grassroots and NGO movements to find alternatives to war even when the leaders of nation states may seek to avoid or actively thwart such alternatives. This process is arguably already in motion; the largest day of coordinated worldwide demonstration in recorded history was the series of February 15th, 2003 demonstrations in over 100 cities worldwide against the Iraq War, demonstrations which totaled between 8 and 15 million attendees (Wikipedia, "February 15, 2003 antiwar protests"). Fellman (1997) goes as far as to consider the recent upswing in global war as the "last gasp" of the adversarial paradigm in the face of a growing global rejection of it.

What is required for the continuation and evolution of this rejection, says Boulding (1988), is for the people to be aware of the historical successes and future possibilities of nonviolence and mutuality. Repeating and expanding on her words cited earlier:

> Since no one can work seriously for an outcome that seems inherently impossible, the unimaginability of a world secured by other social arrangements than those of military establishments stands in the way of serious political moves towards arms reduction, *let alone* disarmament. Fear…is a poor stimulus for creative problem solving because fear rigidifies behavior. Hope, on the other hand, provides excellent stimulus for problem solving and extends the capacity for search behavior. (p. 112)

The traditional vector for the transmission of knowledge and, even at times, hope, has been the educational system. Yet as this appendix has detailed, Peace Studies, either in its critiques of war or its promotion of nonviolence, appears almost nowhere in American public schooling. It is exceedingly unlikely that an A-student emerging from the American public education system will graduate with the knowledge of any of the events

or theories outlined in this paper. If she does, she has almost certainly learned them outside of the traditional curriculum. Traditional education has rendered it invisible, and most so to students who are the highest achievers, the most well-versed in what schools teach.

It is understood that education does not just impart information, but also paradigms, worldviews, understandings explicit and implied about what is and is not possible in human affairs. When so many cultural influences (popular media, government propaganda, family storytelling) reinforce a war paradigm, education often plays right into this pattern: history classes that organize human events as a sequence of wars and decisions made by strong leaders, gym classes that promote adversarial gaming, literature classes that reinforce certain ideas of manhood and violent triumph over adversity in their interpretations (and selections) of readings, etc.

But education also affords students and teachers the opportunity to challenge those paradigms, to present them as only one particular way of looking at human behavior and not as the full range of our capabilities. The study of peace and conflict resolution, in theory and in practice, is hardly a bold and daring new field in human affairs. The body of work and record exists. To withhold the teaching of these concepts and events, whether through ignorance or design, is as a criminal a disservice to our students as withholding the knowledge of trigonometry. Our students will go on to inhabit a world where the construction and maintenance of physical infrastructure— buildings, bridges, highways—will depend upon, among other things, trigonometric skills and knowledge. So too do the construction and maintenance of both the physical and social infrastructure of the schools, communities, nations and world in which we live

depend upon the skills and means to address conflict without the use of violence. Therefore, school climates that promote critiques of violence and the development of alternative conflict resolution would be valuable additions to school curricula and structures even if they did not also promote high academic achievement.

If this author's hypothesis is correct, and they do in fact to coincide, then the call is all the more pressing. Fortunately, curricula and programs that promote peaceable skills in the classroom and reflect peace education beyond it are not merely hypothetical, as demonstrated in 2.0: Review of the Literature. They are already all around us.

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[i]   While the Taliban, operating in Afghanistan, provided shelter and training to the Al Qaeda operatives that engineered the 9/11 attacks, the resulting collective punishment and mass killings and wounding of the Afghan people during the invasion constitute (in my mind) an attack on a people that did us no harm. The domestic analogy would seem to be prosecuting a drug ring by bombing the entire population of the city, even the state in which that drug ring operated. Such an operation would never be considered at home.

[ii]   In all fairness, most if not all of the social studies teachers heavily supplement textbooks with additional readings. Paradigmatically, however, little changes.

[iii]   See David Zeiger's 2006 film *Sir!, No sir!: The suppressed story of the GI movement to end the war in Vietnam* for superb documentary coverage of these movements.

[iv]   The historical revision is not yet over. As the Bush Administration began a buildup towards war with Iran, the news media began reflecting reports that "Iran, not Iraq, fostered relations with the al-Quaked network in the years leading up to the world's most devastating terrorist attack" (Coman, 2004).

[v]   Bucknell's page also mentions the role of the Consortium on Peace Research, Education, and Development (COPRED) in legitimizing the field, and puts the count of higher learning institutions offering Peace Studies programs at 160 in the US alone and 500 worldwide. The 2007 edition of the *Global Directory of Peace Studies and Conflict Resolution Programs* profiles over 450 undergraduate, Master's and Doctoral programs and concentrations in 40 countries and 38 U.S. states.

[vi]   Admittedly, transferring government funding from defense to infrastructure, as Gottlieb details intensely, is not just a simple matter of shifting money from one group of bank accounts to another. Workers trained to build bombers are going to need re-training to build 747s and school busses. Still, when compared with the current enormous investment in the military with such little return, it is hard to imagine the benefits of conversion, even when retraining costs are factored in, not still being better than the present situation.

[vii]   Ferguson (1984) puts it somewhat more bluntly: "The image of humanity, warped by bloodlust, inevitably marching off to kill, is a powerful myth and an important prop of militarism in our society. Despite its lack of scientific credibility, there will remain those `hard headed realists' who continue to believe in it, congratulating themselves for their `courage to face the truth, resolutely oblivious to the myth behind their `reality'" (p. 12).

[viii] Many of these campaigns existed in a larger sphere of events which did indeed include violence, such as uprisings in the *poblaciones* in Chile or the Maoist guerilla movement in Nepal. However, in these and in most of the cases, the presence of violence if anything only strengthened the legitimacy of the dictatorial forces, while nonviolence succeeded in disempowering it. For more discussion of this phenomenon, see Nagler (1997), p. 105-8.